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# **NAVAL POSTGRADUATE SCHOOL**

**MONTEREY, CALIFORNIA**

## **THESIS**

**OPERATION EXODUS: THE MASSACRE OF 44  
PHILIPPINE POLICE COMMANDOS IN  
MAMASAPANO CLASH**

by

Gilbert G. Villareal, Jr.

September 2016

Thesis Advisor:  
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**OPERATION EXODUS: THE MASSACRE OF 44 PHILIPPINE POLICE  
COMMANDOS IN MAMASAPANO CLASH**

Gilbert G. Villareal, Jr.  
Commander, Philippine Navy  
B.S., Philippine Military Academy, 1998

Submitted in partial fulfillment of the  
Requirements for the degree of

**MASTER OF SCIENCE IN DEFENSE ANALYSIS**

from the

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## **ABSTRACT**

The Mamasapano case (also known as OPLAN: Exodus) is a controversial special operations mission that was executed in January 25, 2015, by Philippine National Police commandos to neutralize high-value terrorist leaders. During the last phase of their operation, these commandos were swarmed by different armed groups in the area of operation. This thesis analyzes the factors that led to the failure of OPLAN: Exodus through a unique perspective—the point of view of a special operator—to study how the operation’s structure affected the culture, the environment, the leadership, and the men. The study assesses the leaders’ criteria through the science of strategic thinking, utilizing Game Theory and Multi-Attribute Decision Making; the combination of these two dynamic tools is used to evaluate their potential usefulness in special operations decision making. Finally, this thesis proposes criteria and an organizational solution that can be useful for special operations units like the Philippine National Police Special Action Forces to avoid tragedies and loss of human life, especially in the special operations community.



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## **LIST OF ACRONYMS AND ABBREVIATIONS**

ACP	Advanced Command Post
AFP	Armed Forces of the Philippines
AHJAG	Ad hoc Joint Action Group
AHP	Analytical Hierarchy Process
BIFF	Bangsamoro Islamic Freedom Fighters
CCCH	Coordinating Committee on the Cessation of Hostilities
IB	Infantry Brigade
ID	Infantry Division
JCCT	Joint Crisis Ceasefire Team
MADM	Multi-Attribute Decision Making
MCM	Multi-Criteria Decision Making
MIB	Mechanized Infantry Brigade
MILF	Moro Islamic Liberation Front
OIC-PNP	Officer-in-Charge of the PNP
OPLAN	Operation Plan
PNP	Philippine National Police
PNP BOI	PNP Board of Inquiry
SAB	Special Action Battalion
SAC	Special Action Company
SAF	Special Action Forces
SO	Special Operations
SOCOM	Special Operations Command
SOF	Special Operations Forces
TCP	Tactical Command Post
VDOP	Vehicle Drop-Off Point



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## **EXECUTIVE SUMMARY**

OPLAN: Exodus is a very controversial special operations mission. The government of the Philippines is still investigating and seeks full closure of the case. Since the police commandos executed the mission on January 2015, a series of questions have concerned the public regarding who should be held responsible for the failure of the mission.

Using different points of view, this thesis examines the case of OPLAN: Exodus, which resulted in the massacre of 44 Philippine National Police Special Action Forces (PNP-SAF) at Mamasapano in Maguindanao province. The events will be examined through deductive methods. This study will examine the events and how they affect the PNP-SAF as a unit or organization. The next step is to utilize the theory of organization to come up with the reason for the failed outcome of the operation. The PNP-SAF is treated as a system affected by its environment, culture, and leaders.

Game Theory is then used to establish the criteria of the leader's strategy to come up with the critical decision during the Mamasapano encounter. Game Theory is then followed by the use of Multi-attribute Decision Making (MADM) to identify the decision-making criteria of the leaders involved. Consequently, this method identifies the basis from which leaders made critical decisions during the mission's execution.

OPLAN: Exodus provides a good case study of a special operations mission. As a case study, it allows the application of both qualitative and quantitative approaches for examining the organization and the strategy of mission leaders. By identifying the causes of the failure, this study will suggest what the government of the Philippines should consider conducting special operations missions in the future. An inter-agency approach, which is key in this new trend of special operations missions, may avert future blunders like OPLAN: Exodus.

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Thanks go to all special operators in the Philippines, who have always been silent professionals and who continue to serve and protect the democracy of the country. Thank you also to the leaders of the AFP and the Filipino people who continue to support soldiers protecting our freedom.

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our first time being together for a solid 18 months. Through sacrifice, patience, and love, together with our faith in God, we achieved this accomplishment for us and for our country.

## **I. INTRODUCTION**

On 25 January 2015, 44 members from 392 Special Action Group (SAF), a commando unit of the Philippine National Police (PNP), were killed during an operation called Operation Plan (OPLAN): Exodus (PNP Board of Inquiry (BOI), 2015). According to the report, the main objective of OPLAN: Exodus was “to neutralize high value targets (HVTs)” that were on the list of U.S. wanted international terrorists (PNP BOI, 2015). The PNP confirms that their mission was a high priority special operation that was conducted in the municipality of Mamasapano, in the province of Maguindanao in the central part of Mindanao (PNP BOI, 2015, pp. 13–17). The people of the Philippines were shocked when the commandos were killed by the rebel group called Moro Islamic Liberation Front (MILF), which had standing peace negotiations with the government during this time. The terrible events in Mamasapano raised many questions: How could a special operation unit be killed while enforcing the law to capture terrorists? What happened to the command group and the support units that should have reinforced the special operations unit during the firefight? How is it that the findings of the Philippine Senate and the PNP Board of Inquiry, as an independent investigating party, differed from those of the joint investigation report of Philippine National Bureau of Investigation and the National Prosecutors about the command responsibility of this operation?

The operation was a consolidated effort of the Government of the Philippines (GHP) and the United States during their joint development and intelligence build-up. The Armed Forces of the Philippines together with U.S. Joint Special Operation Task Force-Philippines and the Philippine National Police were aware of the project, but there was compartmentalization during the execution phase (PNP BOI, 2015). The PNP Board of Inquiry (BOI) found that the findings of the Senate and the Philippine National Police attributed the resulting 44 deaths to lack of coordination, fault in the chain of command, poor mission planning, and inadequate intelligence. This thesis, using both quantitative and qualitative approaches, will attempt to show that these problems could have been mitigated, if not prevented, if there had been a joint interagency system for special

operations on such crises as Tier 1 missions. Such sensitive operations have political implications that should be considered when utilizing special operations units like the PNP-SAF, Rangers, Special Forces, Navy Sea Air Land Teams, and other specialized soldiers. Essentially, the focus of this thesis is to provide another interpretation that considers key factors using qualitative and quantitative analysis. Employing qualitative methods, the operation is examined through event analysis and organizational structure analysis. Quantitative methods analyze the case through causal factors and through the multi-attribute decision making process and Game Theory. These methods lead to a possible analytical methodology that could be used in future operations to prevent a failure of this magnitude. Interpretations of my results may explain some disparities in OPLAN: Exodus and could provide some exhaustive analysis applicable to future decision making, especially when employing special operations units.

In the qualitative analysis, this thesis focuses on applying the principles of organization design to critically examine OPLAN: Exodus (Mintzberg, 1981). Was the organization fit for the mission? How did the leaders analyze the mission of the organization? The succeeding chapters tackle quantitative analysis by applying causal map, Game Theory, and multi-attribute decision making (MADM) in a way that contribute to structural accounts of the OPLAN: Exodus (Bates et al., 1998). A method of devising strategic decision-making criteria related to special operations taken from the Doctrine for Special Operation from U.S. JCS Joint Publication 3-05 and other references for special operations, such as William H. McRaven (1995), are used to analyze its strategic utility similar to the application of Hasan Belgin and Kerin Gostepe (2009). A simple model of strategic application uses Game Theory to show how the factors of decision making greatly affect special operations units during crises. These methods take a different approach by initially consolidating all the reports and investigations that were made since the event and applying a holistic approach to suggest a theory or mechanism that can explain the factors that led to the failure of OPLAN: Exodus.

## **A. SCOPE AND LIMITATIONS**

This thesis uses data taken from open sources and academic references that can be applied to study the Mamasapano case. The organization structure and design analysis is based on the presentation and interpretation of information from the Philippine senate inquiry (Philippine Senate Committee, 2015). This information was supported by the investigation reports published on Philippine government websites (PNP BOI, 2015; NBI-NPS SIT, 2015). All of these references have been consolidated since the incident happened in January 2015. Additionally, the thoughts and conclusions expressed herein are solely the author's opinion.

## **B. RESEARCH QUESTIONS**

This research addresses the following questions:

### **Primary Question:**

- What are the factors in the organization of Philippine National Police Special Action Forces that led to the tragic result of the special operations mission OPLAN: Exodus?

### **Secondary Questions:**

- What are the criteria and principles of special operations that the leaders failed to consider on OPLAN: Exodus?
- What can the Philippine special operations organizations do to avoid such a failure in the future?

## **C. LITERATURE REVIEW**

The following section describes the literature used in this research paper.

### **1. ORGANIZATION STRUCTURE ANALYSIS**

Henry Mintzberg's Theory of Organizational Structure approach explains some of the research questions related to the effectiveness and efficiency of organizations (Mintzberg, 1980). The special operations unit will be treated as a whole system with other sub-systems performing their tasks towards a specific goal. In this case, the goal was to neutralize the high-value targets (PNP BOI, 2015). The organization (PNP-SAF) followed its own timeline focusing on their mission from training, planning, and



execution of the mission. These were milestones in the operation, but in the end, the organization failed as a whole system. Decision makers did not consider the environment of the organization and ignored other factors to achieve the organizational goal. The culture of the organization (Quinn, Mintzberg, & James, 1988) that was developed in the PNP-SAF may also have affected the leadership and personnel as in the special operation, “Operation: Kingpin – The U.S. Army Raid on Son Tay” (McRaven, 1995).

The aftermath of the Mamasapano massacre has convinced the PNP BOI to recognize the importance of joint operations among agencies of the government in critical and sensitive operations similar to the U.S. Special Operations Command (SOCOM), which integrated all special operations units under one command (Marquis, 1997). This drastic move of reforming the U.S. defense organization was implemented under the Goldwater-Nichols Act of 1986 (Locher, 2002).

## **2. ANALYTICAL NARRATIVES**

The logical method to understand the whole operation is to create a chronological discussion of the operation from start to end and examine significant milestones that occurred along the operational timeline. The causal factors that led to the actual tragedy are also examined. To construct the operation timeline, I collected reports of the chronological events related to the operation. These reports were published in different forms depending on the investigation and purpose of the investigation.<sup>1</sup> Consolidating these accounts helps in detailing critical interpretations and observations that are important in causal mapping by examining multiple events that comprise the whole system of organization. The method of causal mapping considers the organizational and temporal space that led to faulty decisions and uncoordinated action. Robert Bates and his co-authors discuss several authors who consider this analysis in a study of “how

---

<sup>1</sup> The PNP BOI presented a sequence of chronological events in the operation and the chain of events from coordination of the leaders and key personalities. The Senate Committee presented a series of phone calls in coordination with the MILF to exercise the ceasefire during the actual firefight between the government troops and the MILF rebels.

multiple interpretations can exist for a given observation, each internally coherent and each fitting the facts as they are known” (Bates et al., 1998; Taylor, 1985). Scott Snook defines this method of confirming both reliability and validity by triangulating multiple accounts across sources that will establish just what information was available to whom and when (Snook, 2000).

The quantitative method of analysis applied to this case study is the Analytical Hierarchy Process (AHP) (Fox & Giordano, 2015). AHP is a multi-criteria decision making tool that ranks alternatives based upon weighted criteria and, thus, is an essential application to provide mathematical insights to strategists like military leaders who need help selecting alternatives in strategic environments. The analytical narrative applies in OPLAN: Exodus initially through criteria used in some principles of special operations and putting it into mathematical context through AHP and Multi-Attributes Decision Making (MADM; Fox & Giordano, 2015)<sup>2</sup>; the purpose of this method is to come up with a ranking of competency in employing special operations units in uncertain situations like the Mamasapano case. This analytical method identifies the drawbacks of the strategy used by the mission leaders in their decision making.

The AHP utilized in this case study is the U.S. SOCOM criteria for the special operations mission mentioned in the theory of special operations (McRaven, 1995) and U.S. JCS Joint Publication 3-05 (2005). Through the special operation mission criteria, Game Theory generates ranked entities that can help mission leaders to provide guidance in planning and executing a special operation by considering an interagency approach or for a unit like the PNP-SAF, which independently executed a strategic special operation. The ranked entities generated by Game Theory, based on mission criteria, can be valuable to mission leaders and may ultimately guide them when they consider employing special operations units (Belgin & Gostepe, 2009). Military leaders should

---

<sup>2</sup> MADM is conceptual program in Microsoft Excel that provides ranking values as a base from which alternatives and criteria are generated for decision makers. The criteria are set by a hierarchy based on the data set and decision needed.

consider these criteria in employing special operation forces based on a unit's limitation and capabilities. Perhaps by applying strategic thinking, mission leaders can avoid repeating the mistakes made in OPLAN: Exodus. Any special operation strategy (Dixit & Nalebuff, 1991) should always consider insights provided by Game Theory in approaching any dealings.

#### **D. APPROACH**

This research paper is divided into five chapters. A brief summary of OPLAN: Exodus and the method of approach are introduced in the Chapter II. The detailed report and the ongoing investigation are also discussed in Chapter 2. Accompanying this information is a consolidation of all government reports and an explanation of all released documents, including maps and interviews, and media coverage. These sources of information essential for this case study are related to the methods of analysis. Chapter II interprets the reviews from official findings as the starting point of analysis of the case study.

Chapter III explains the case through qualitative analysis. This section covers narrative approaches to PNP-SAF as an organic system of organization. The principle of organizational structure approach of Mintzberg and James Thompson is used to analyze the context and the environment (Mintzberg, 1981; Thompson, 2003). A stakeholder analysis defines dependent and independent variables that surround the organization. Organizational design is used to analyze the Task Force or the PNP-SAF involved in OPLAN: Exodus. The purpose of this analysis is to determine whether the organization is fit (Mintzberg, 1980). Chapter III examines the organizational failure through the concepts of its parts and its environment. The organizational culture is considered, and the coordinating mechanisms used by the organization as well as how they were applied in uncertain and complex situation are examined. Organizational tragedies like OPLAN: Exodus lend themselves to structural analysis, particularly when an organization fails in an unfamiliar context. The categories to be examined are the organizational culture, the external and internal environment in which the organization operates, and the five parts

of Mintzberg's organizational theory, as well as where and when these parts have not functioned effectively.

Chapter IV presents the quantitative method of analysis. Chapter IV establishes a Game Theory model using causal decisions based on the strategic thinking of leaders. The model presented is that of a partial conflict game. Then, the decision-making criteria of the leaders is reviewed and tested to become the criteria for analysis using MADM. The combination of these two quantitative analyses examines the leadership decision-making criteria for special operations and how it is a factor in the mission objective.

Leaders who consider applying Game Theory to gain the strategic advantage in selecting organizations for special operations missions may benefit from a holistic approach that would result in recommending an interagency organization for future use (PNP BOI, 2015). This result corresponds to the government investigations and to the PNP BOI recommendation; creating an interagency form of special operations organization will avoid bureaucracy and enhance coordination and adhocracy. In fact, a similar end product resulted from the special operations fiasco during the Iran hostage rescue; defense reform was established under the Goldwater-Nichols Act of 1986 (Locher, 2002). The defense reform separated the special operations units into separate combat commands that have been effective. U.S. SOCOM is among the most effective commands of the United States Armed Forces and covers the full spectrum of irregular warfare, including matters similar to OPLAN: Exodus.

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## II. OPERATION PLAN: EXODUS

Smart people make bad decisions.

—Zachary Shore

### A. PHILIPPINE NATIONAL POLICE SPECIAL ACTION GROUP

The Special Action Force (SAF), according to a Philippine local news network called GMA Network, is “considered to be an elite unit of the Philippine National Police (PNP) against terrorism and internal security threats.” It discreetly mobilized on 24 January 2015, a total of 392 commandos for a high-risk law enforcement operation dubbed OPLAN: Exodus (PNP BOI, 2015).

The principal objective was to neutralize high-value targets Zhulkifli Bin Hir/Zulkifi Abhir (Marwan), a terrorist leader of the Jema’ah Islamiyah (JI); Ahmad Akmad Balabol Usman, the leader of the Special Operations Group of the Bangsamoro Islamic Freedom Fighters (BIFF); and Amin Baco, a Malaysian JI member and expert in improvised explosive device bomb-maker (see Figure 1) (PNP BOI, 2015).

Figure 1. High Value Target of OPLAN: Exodus



Source: PNP BOI (2015), Philippine Senate Committee (2015).

According to PNP BOI, by late afternoon on 25 January 2015, the lifeless bodies of 44 SAF commandos of the main effort were scattered in the cornfields, marshlands, parched soil, and riverbanks of Mamasapano, Maguindanao (PNP BOI, 2015). The same report indicated, that at the time of the incident, 30 others continued to fight for their lives while under heavy enemy fire. A further 297, who comprised the bulk of the support element, scampered to save their fellow SAF commandos. The remaining 21, most of whom are senior SAF officers, including its head or Director, monitored the situation, “re-planned, issued directives and called for support” (PNP BOI, 2015, p. i).

This report evaluates the PNP-SAF within the framework of organizational design to understand what produced the tragic outcomes of OPLAN: Exodus. The PNP report (PNP BOI, 2015) is a detailed account of the planning and execution of the operation, given as the basis of organization evaluation. It becomes clear that the loss of 44 police commandos could have been mitigated with better coordination and planning. The analysis section evaluates why coordination and planning failed by looking at the organizational structure, coordination mechanisms, workflows, and culture of the PNP-SAF.

## **B. TARGET AREA: MAMASAPANO, MAGUINDANAO**

Mamasapano is a rural municipality with slightly more than 22,300 residents spread out over 33 square miles. Located in the province of Maguindanao, on the island of Mindanao, it is one of several provinces that comprise the Autonomous Region of Muslim Mindanao (ARMM) (*Official Gazette*, 2015). The area is described by a Philippines’ government source as terrain covered in marshland, criss-crossed by rivers and canals (*Official Gazette*, 2015). The *Official Gazette* of the government of the Philippines also reports that Mamasapano has dense areas of trees and other vegetation interspersed with fields of tall cornstalks and large swaths of open grassland. Many of the locals live around one of the 15 Barangays (neighborhoods) in Mamasapano (*Official Gazette*, 2015). The rest live throughout the countryside in areas with small collections of thatched huts, making it difficult for an assault force to infiltrate the area unseen (see Figure 2) (*Official Gazette*, 2015).

Figure 2. The Target Area of OPLAN: Exodus, Mamasapano Municipality



Source: Philippine Senate Committee (2015).

The people of Maguindanao have a long history of violent resistance to outside forces (Philippine National Commission for Culture and Arts, 2015). The same source describes the people who occupy the area as predominantly composed of indigenous Moros, who refuse to identify themselves as Filipino (Philippine National Commission for Culture and Arts, 2015). Accordingly, since the arrival of Islamic missionaries in the 16th century, the Moros developed a unique culture, fostered by geographic isolation, and a fierce sense of independence. War against outside forces is a proud part of Moro tradition. In the 17th and 18th century, they resisted Spanish colonization and at the turn of the 20th century they fought American colonization in the Moro Rebellion. During World War II, they partnered with Americans to retake Mindanao from Japanese occupation (Philippine National Commission for Culture and Arts, 2015). The source explains that the perennial struggle for Moro independence continued after the Government of the Philippines (GPH) re-established its sovereignty in the region (Philippine National Commission for Culture and Arts, 2015). In addition, decades of armed struggle between the Moro people and GPH led to the creation of the Autonomous Region of Muslim Mindanao in 1990 (Philippine National Commission for Culture and Arts, 2015). The Voice of America describes the status of the Moros in the Mamasapano area as having limited self-governing rights but legislative and taxation rights; many



Moros welcomed this solution (Voice of America News, 2009). However, some armed groups pressed for more concessions and continued their insurgency against GPH.

Numerous armed groups inhabit Mamasapano and the greater region, but none of them is as powerful as the Moro Islamic Liberation Front (MILF). The MILF was founded in 1987, when it splintered from the more moderate Moro National Liberation Front (PNP BOI, 2015). The MILF would eventually grow to be the largest and strongest separatist group in the Philippines (PNP BOI, 2015). Well manned and equipped, they are organized like a national military with an established chain of command and regionally assigned brigades. Mamasapano is the stronghold of their 105th Brigade (PNP BOI, 2015). Under the command of Ustadz Goma, they have 1,000 fighters based in the immediate area of OPLAN: Exodus and present a formidable challenge to any outside forces (PNP BOI, 2015).

In addition to the MILF, Mamasapano is home to an element of BIFF and private armed groups (PAG) (PNP BOI, 2015). The board of inquiry report also notes that the latter is a classification for local fighters that are not members of an established armed group. Bound by the culture of Pintakasi, based on blood ties and religion, these individuals pick up arms to defend their homes against a common enemy (2015). The BIFF is another dedicated and capable armed group, with several hundred fighters in the area. Unlike the MILF, BIFF has no ceasefire agreement with the GPH (PNP BOI, 2015, p. 29). The report also points out that it is an understatement to describe Mamasapano as enemy-controlled because the vast number of fighters, their familiarity of terrain, and complete local support make Mamasapano an enemy stronghold (see Figure 3) (PNP BOI, 2015, p. 29).

Figure 3. Enemy Location and Estimated Strength



Source: PNP BOI (2015).

Though Mamasapano is an enemy stronghold, there is a significant Armed Forces of the Philippines (AFP) presence in the region. Western Mindanao Command headquarters, under the command of Lieutenant General Rustico Guerrero, is located in Zamboanga, on the eastern tip of Mindanao. The 6th Infantry Division, along with its complement of artillery and mechanized support, are based in Maguindanao and regularly support peace and police operations (PNP BOI, 2015, p. 74).

### C. CASE STUDY

In this section, the high-value targets associated with and the events leading up to OPLAN: Exodus are described briefly as are the various groups related to the massacre at Mamasapano. Finally, the faulty mission planning and the tragic events of the January 2015 special operation are detailed.

#### 1. History of Operation Exodus

In 2002, Marwan became an internationally hunted terrorist (*Official Gazette*, 2015). He is also described by the GPH *Official Gazette* (2015) as a co-conspirator of the Bali, Indonesia bombing, which killed 202 people and injured 209 more. According to Miniter, “the dead included eighty-eight Australians, thirty-eight Indonesians, twenty-seven Britons, seven Americans, six Swedes, six Germans, and individuals from

seventeen other countries” (2011). The attack elevated the Malaysian engineer to a jihadi hero and internationally wanted terrorist (Minitier, 2011).

On the run, Marwan found refuge in the Autonomous Region of Muslim Mindanao, in the southern Philippines. Protected in a rebel stronghold and out of reach of those hunting him, Marwan ingratiated himself with his hosts by sharing his bomb-making expertise. According to the PNP BOI (2015), since April 2002, he conducted ten bombings in Mindanao, killing 46 people and injuring 207 others. The same report indicated that warrants for Marwan’s arrest have been issued by local courts in the Philippines and U.S. District Court, North District of California (PNP BOI, 2015, p. 10). The investigation report indicated a \$5 million bounty was issued by U.S. State Department for his arrest under the Rewards for Justice Program (PNP BOI, 2015, p. 10).

Usman is of similar terrorist stature in the region. As the head of the Special Operations Group for the BIFF, Usman participated in five bombings that left 17 dead and 62 others wounded (PNP BOI, 2015, p. 10).

Capturing Marwan and Usman would prove to be challenging according to the report (PNP BOI, 2015). The task was the responsibility of the PNP-SAF and the AFP. Though the two groups were subordinates to different departments of the government, i.e., PNP to the Department of the Interior and Local Government and the AFP to the Department of National Defense, their efforts to capture Marwan and Usman were coordinated. With SAF in the lead, the AFP was poised to support with combat-ready forces in nearby locations (PNP BOI, 2015).

In addition to coordinating with each other, Philippine forces were obligated to coordinate with the MILF for any operation inside the Autonomous Region of Muslim Mindanao. According to the PNP BOI (2015), the ongoing peace process required 24-hour notification, through the Ad hoc Joint Action Group (AHJAG) prior to an operation. The report points out that this allows the MILF commanders time to notify local forces and prevent unintended attacks on government forces (PNP BOI, 2015).

In March 2010, the SAF launched Operation Pitas, the first of the nine missions that would fail to apprehend Marwan and Usman (PNP BOI, 2015); both terrorists

escaped hours before the assault force arrived. Over a year later, Operation Smartbomb would fail in the same manner. Operation Wolverine II, the sixth attempt, was aborted due to the 1st Mechanized Infantry Brigade (1st MIB) withdrawing support in the form of armored vehicles (PNP BOI, 2015). Two months later, in May 2014, the SAF aborted Operation Wolverine III due to the significant presence of heavily armed enemy in the vicinity of the planned vehicle drop off point (VDOP) (PNP BOI, 2015).

On the following month, elements of the Philippine Army, the 6th Infantry Division (6th ID) and 1st MIB, were the units assigned to conduct an operation against Marwan and Usman (PNP BOI, 2015). This operation was conducted without any notice to PNP-SAF, based on the report from the BOI (2015). The Senate Inquiry (Philippine Senate Committee, 2015) indicates that Director of SAF (DSAF) Getulio Napanas considered the operation and lack of coordination as underhanded, which exacerbated the growing distrust he felt towards the AFP (Philippine Senate Committee, 2015).

Later in 2014, the SAF conducted two more missions. Operation Terminator was aborted when boats SAF hired capsized as the team moved upriver (PNP BOI, 2015). In December, they launched Terminator II but aborted early during the infiltration when the assault force was heavily engaged by enemy fighters along the river (PNP BOI, 2015). This failure, along with several previously aborted missions, was attributed to operational security leaks within the AFP (PNP BOI, 2015).

SAF would not be discouraged by the failures. Within weeks, the leadership reworked the plan and submitted it up the chain of command; OPLAN: Exodus was on the table (PNP BOI, 2015). This time operational security superseded coordination, and the AFP were not informed about the mission (see Figure 4) (PNP BOI, 2015).

Figure 4. Operations Prior to OPLAN: Exodus

PNP OPERATIONS AGAINST MARWAN			
NAME OF OPERATION	AREA OF OPERATION	DATE IMPLEMENTED	REMARKS
OPLAN "PITAS"	Parang, Sulu	December 2010	Executed.
OPLAN "SMARTBOMB"	Butig, Lanao Del Sur	July 2012	Executed.
OPLAN "WOLVERINE"	Mamasapano, Maguindanao	December 2012	Mission aborted.
OPLAN "CYCLOPS"	Marawi City	April 2013	Executed.
OPLAN "CYCLOPS 2"	Marawi City	June 2013	Mission aborted.
OPLAN "WOLVERINE 2"	Mamasapano, Maguindanao	March 2014	Mission aborted.
OPLAN "WOLVERINE 3"	Mamasapano, Maguindanao	May 2014	Mission aborted.
OPLAN "TERMINATOR"	Mamasapano, Maguindanao	November 2014	Mission aborted.
OPLAN "TERMINATOR 2"	Mamasapano, Maguindanao	December 2014	Mission Aborted.
OPLAN "EXODUS"	Mamasapano, Maguindanao	January 2015	MARWAN KILLED (As confirmed by the US FBI). 44 SAF troopers KIPO. Allegedly 18 MILF fighters and 4 civilians were killed.

Source: PNP BOI (2015).

## 2. Notable Groups

**Special Action Force (SAF).** As discussed by the PNP BOI, “the SAF are an elite unit of the Philippine National Police force” (PNP BOI, 2015). As noted in the report, they were tasked with the planning, execution, and command and control of OPLAN: Exodus (2015). During the operation they organized the following elements:

- **84th Special Action Company (SAC)/Seaborne.** The 84th SAC was the main effort and the assault force for the operation. It was tasked to capture Marwan and Usman.
- **55th Special Action Company (SAC).** The 55th SAC was a part of the support element and served as the blocking force for the assault force.
- **4th Special Action Battalion (SAB).** The 4th SAB comprised the majority of the support element and was tasked to secure the infiltration/exfiltration route.

- **6th Infantry Division (ID), Philippine Army.** The 6th ID was based in Maguindanao, the area of operation for OPLAN: Exodus. It had tactical control of the military units in the surrounding area and was responsible for coordinating the military response to aid the besieged SAF.
- **1st Mechanized Infantry Brigade (MIB).** The 1st MIB was tasked to reinforce and support the SAF. Its Commanding Officer served as the Ground Force Commander for the initial military response.
- **Coordinating Committee for the Cessation of Hostilities (CCCH).** Established as part of the Peace Agreement between the Philippine government and the MILF, the CCCH was responsible for monitoring the ongoing ceasefire and peace agreement between the Philippine government and the MILF.
- **Joint Ceasefire Crisis Team (JCCT).** The ad hoc team was responsible for negotiating and implementing the ceasefire.
- **Ad hoc Joint Action Group (AHJAG).** Established to enforce the terms of the peace agreement, the AHJAG was responsible for coordinating Philippine government operations in the Autonomous Region of Muslim Mindanao.

### 3. The Seeds of Failure: Operational Planning

The initial concept of operation for OPLAN: Exodus was devised in December 2014 (PNP BOI, 2015; *Official Gazette*, 2015). The PNP BOI and GPH *Official Gazette* describe that OPLAN: Exodus would be the SAF's third attempt to capture Marwan and Usman since the previous month, when suspended Chief of PNP (CPNP) Alan Purisima directed the SAF to increase their efforts to capture the terrorists. DSAF Napenas was the commander in charge of the planning and execution of the mission (PNP BOI, 2015). According to the sources, on 9 January, DSAF Napenas and CPNP Purisima briefed President Benigno Aquino on the operation. The president agreed with the plan and instructed them to coordinate with the AFP (PNP BOI 2015). Both men voiced concerns over operational security leaks within the AFP. DSAF Napenas recommended using a "time on target (ToT)" as the coordination mechanism (PNP BOI, 2015, p. 58). As described by the source, the ToT notification mechanism allowed the SAF to withhold

coordination with the AFP and MILF until the assault team arrived on target, mitigating operation security concerns. President Aquino did not respond (PNP BOI, 2015).

The AFP, the Secretary of the Department of Interior and Local Government and the Officer-in-Charge of the PNP (OIC-PNP) were noticeably absent from the meeting (PNP BOI, 2015, p. 52). The report also indicates that the Department of Interior and Local Government secretary was CPNP Purisima's boss and directly subordinate to the president. Since Purisima was suspended and pending investigation, the OIC-PNP was his replacement and directly in charge of DSAF Napenas (PNP BOI, 2015).

As described by the report, after the meeting with President Aquino, CPNP Purisima instructed DSAF Napenas that he would personally coordinate OPLAN: Exodus with the AFP, Secretary of Interior and Local Government, and OIC-PNP (PNP BOI, 2015). However, this did not happen. The mission would commence with only the SAF and select leadership in the PNP being informed. The military and the CCCH would not be informed until it was too late.

#### **4. Operation Exodus**

**Overview:** OPLAN: Exodus involved nearly 300 members of the SAF. The plan called for the 84th SAC to be the assault force (PNP BOI, 2015). It would insert along a highway and foot patrol four kilometers to the target, consisting of several isolated huts (PNP BOI, 2015). Upon capturing the terrorists, the 84th SAC would return to the highway along the same infiltration route, rendezvousing with numerous route security elements (PNP BOI, 2015). The 55th SAC would insert three hours after the assault force and serve as the blocking force, preventing enemy fighters from entering the target area. The 4th SAB, split into four companies, would secure the length of exfiltration route (PNP BOI, 2015). The targets were located in Maguindanao in the Autonomous Region of Muslim Mindanao, a stronghold of the MILF and other armed rebel groups (PNP BOI, 2015). It was assumed a fully mobilized enemy could reach 1,000 fighters (PNP BOI, 2015).

**Execution:** The 84th SAC started its infiltration at 22:15 on 24 January 2015 (PNP BOI, 2015). Though the 84th SAC had a local guide leading the way, the swampy

terrain slowed their movement (PNP BOI, 2015). Five hours later, the team reached a river just south of the target (PNP BOI, 2015). By 0400, only 13 operators managed to cross the river (PNP BOI, 2015). Already running two hours behind and wanting to use the cover of darkness, the 84th SAC commenced the assault (PNP BOI, 2015).

The 55th SAC was not at its designated blocking position when the 84th SAC started the assault (PNP BOI, 2015). The 55th SAC still had a kilometer left to patrol when gunfire sounded from the direction of the target. Knowing the assault force was engaged, the 55th SAC decided to stay put, secure the area, and wait for the 84th SAC to rendezvous (PNP BOI, 2015). Two operators from the 55th SAC were tasked to secure the far side of a nearby bridge (PNP BOI, 2015). As they moved across they were stopped by the sound of men shouting. Correctly assuming the enemy was approaching, the two men returned to the main element. The team leader of the 55th SAC directed his men to form a defensive perimeter in place, in the middle of a cornfield. Lying on their bellies with only cornstalks as concealment, they watched the enemy gather across the river (PNP BOI, 2015).

Shortly after 0400, the 84th SAC assaulted the target with 13 operators. With such a small force, the decision was made to only assault Marwan's hut (PNP BOI, 2015). As they approached the hut, an improvised explosive device was triggered, injuring two operators (PNP BOI, 2015). Marwan initiated contact with the assault force and a firefight ensued. Fifteen minutes later, he lay dead with a gunshot to the chest (PNP BOI, 2015). The team leader radioed DSAF Napenas in the Tactical Command Post (TCP) to inform him the target was dead. Assuming the firefight had woken the hornet's nest, the 84th SAC quickly took biometrics off Marwan and prepared for contact as they started exfiltration (PNP BOI, 2015).

DSAF Napenas exercised command and control from the TCP along with a handful of staff. The 84th and 55th SAC reported directly to DSAF Napenas over a shared radio net (PNP BOI, 2015). Meanwhile, he designated the 4th SAB Commanding Officer, Hendrix Mangaldan, as the Ground Force Commander and directed him to establish an Advanced Command Post near the VDOP. As Ground Force Commander, Mangaldan would control the 4th SAB and relay their communications traffic to the TCP.



The 4th SAB personnel did not have a shared radio link with the 84th SAC or 55th SAC (PNP BOI, 2015). Communication between the tactical units would only be possible by relaying through the TCP.

The 84th SAC was re-engaged by hostiles as they left the target. The team attempted to bypass the contact by maintaining concealment and not returning fire. As the sun started to rise, concealment would become impossible. Their blocking force, waiting in a cornfield a kilometer to the south, was in a precarious position (PNP BOI, 2015).

The 55th SAC lay 40 meters across the river from a large enemy force (PNP BOI, 2015). As day approached, the opposing forces could see each other. For unknown reasons, the 55th SAC team leader decided not to engage the hostiles at night, though his team was equipped with night vision goggles. Just after 0500, the hostiles commenced the attack with assault rifles, grenades, rocket propelled grenades, and mortar fire (PNP BOI, 2015). Taking fire from multiple directions, members of the 55th SAC were fighting for their lives.

Meanwhile back at the TCP, reports trickled in informing DSAF Napenas that the 84th and 55th SAC were heavily engaged. Understanding the enemy potential in the area, DSAF Napenas began coordination with the military (PNP BOI, 2015). He also updated his superiors. Just before the 55th SAC was engaged DSAF Napenas informed OIC-PNP Espina, his immediate supervisor, that the operation was underway. This was first time the acting head of the PNP was informed about the operation. At 0506, DSAF Napenas sent a text message to Major General Edmundo Pangilinan, the commander of the 6th ID (PNP BOI, 2015). The text informed General Pangilinan of the operation and provided a grid for the 55th SAC. Knowledge of the operation was quickly spread to the various military units in the area, who prepared to give support. At 0537, DSAF Napenas called Brigadier General Manolito Orense, the Philippine government representative to the AHJAG to request coordination with the MILF of the ongoing operation. Orense reached out to his MILF counterpart for assistance (PNP BOI, 2015).

At 0640, Police Superintendent Mangahis, working in the TCP, contacted Colonel Del Rosario of the 1st MIB requesting support to extract the SAF (PNP BOI, 2015).

Because prior coordination did not happen, Colonel Del Rosario required Mangahis to report to the 1st MIB headquarters to brief him on the situation and form an extraction plan. Twenty minutes later, Mangahis arrived at the headquarters and they quickly developed a three-part plan: First, send eight armored vehicles to secure the VDOP (PNP BOI, 2015). Second, insert two Division Reconnaissance Companies, with two armored vehicles to support the SA. Third, use 105mm artillery to disrupt hostile forces (PNP BOI, 2015). The PNP BOI report states that Colonel Del Rosario sent a text message with the plan to Major General Pangilinan. The report also indicates that he approved the first two parts of the plan but denied the third for lack of clear situational awareness (PNP BOI, 2015, p. 26). By 0820, the 1st MIB support element was moving to the VDOP.

At 0650, the MILF Chair Rasid Ladianan of the CCCH, sent a text message to his Philippine government counterpart, Chair Carlito Galvez (PNP BOI, 2015). He informed Galvez of the ongoing firefight between MILF forces and government forces. He then urged Galvez to commence with the cease-fire process<sup>3</sup> by establishing a Joint Ceasefire Crisis Team (JCCT). After Galvez confirmed the ongoing clash with the AFP, he immediately formed a JCCT with MILF Chair Ladianan and several other monitors (PNP BOI, 2015). They headed to the local MILF commander's home to negotiate the ceasefire.

As the JCCT was forming, President Aquino was exchanging text messages with suspended CPNP Purisima. Purisima first informed the president about the ongoing operation at 0545, confirming that Marwan was killed and the SAF had sustained a couple of casualties (PNP BOI, 2015). Two hours later, he responded to the text message asking why the other targets were able to escape and why a 300-man SAF force, supported by the AFP, could not fight through the hostile force (PNP BOI, 2015). CPNP Purisima placated the president, telling him the SAF was fighting through the contact and

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<sup>3</sup> There was an ongoing ceasefire between the government and the MILF before the OPLAN: Exodus. This had already existed since 18 July 1997. The Coordinating Committee on the Cessation of Hostilities (CCCH) and International Monitoring Team (IMT) facilitated this negotiation (PNP BOI, 2015).

being reinforced by the 1st MIB. At the time he wrote this, the 55th SAC was being annihilated.

At 0700, the 55th SAC was fighting not to be overrun by the enemy (PNP BOI, 2015). The team leader radioed the TCP and requested immediate artillery support and reinforcements. This was the first call from an SAF requesting military support. This request was in line with the plan, which stated the primary support, if faced by an overwhelming enemy, was artillery. The 55th SAC started with 36 men in the cornfield (PNP BOI, 2015). Pinned down and outgunned, they began to lose men. As they pleaded for support, the enemy force grew. Within two kilometers of the 55th SAC's position were an estimated 300 hostiles now opposing the SAF forces; they were a combination of MILF, BIFF, and private armed groups (PNP BOI, 2015). The enemy's response to SAF presence was spontaneous, and the hostiles were not directly under the command of any leader. Furthermore, many of the hostiles were from private armed groups. This simply meant they were locals fighting a common enemy. The 55th SAC was facing a cultural phenomenon called "Pintakasi." When an enemy enters your land, every male grabs a weapon and fights (PNP BOI, 2015).

Into the late morning, the 55th SAC held its ground (PNP BOI, 2015). With much of their team already dead, the remaining men started to run out of ammunition. The enemy force took advantage of the reduced fire and crossed the river into the cornfields. The men of the 55th SAC fought the enemy at close range inside the cornfield, but they were overwhelmed. The few men still alive were executed by the hostiles. By 1100, 35 elite police officers lay dead in the cornfield; no support came (PNP BOI, 2015).

The 45th SAC and the 42nd SAC, assigned as route security were re-tasked to support the 55th early in the morning (PNP BOI, 2015). Due to the delay that started with the assault force, the 45th SAC and 42nd SAC had just started insertion when they were re-tasked. One kilometer south of the 55<sup>th</sup> SAC, they were engaged by fortified enemy position across a large open marsh. The route security companies could not advance (PNP BOI, 2015).

Colonel Del Rosario assumed Ground Force Command of supporting military units once he arrived at the VDOP. He quickly tasked two armored vehicles and the 62nd Division Reconnaissance Company to rendezvous with the 45th SAC and 42nd SAC and reinforce the 55th SAC. He tasked Bravo Company from the 45th IB to take a different route to reinforce the 55th SAC (PNP BOI, 2015). The marshland prevented the armored vehicles from moving off the road, but at 1030, the 62nd DRC, along with the 43rd SAC, joined the 45th and 42nd SAC (PNP BOI, 2015). With a force nearly doubled in size, the 4th SAB forces and the 62nd DRC could not maneuver across the open marshland. They would not advance any further. The only hope was for the peace process to work.

By 1034, Chair Galvez texted Chair Ladiasan that a ceasefire had been advised to the SAF and requested he do the same with the MILF (PNP BOI, 2015). Meanwhile, the JCCT was traveling to the house of Ustadz Goma, the commander of MILF forces in the area. By 1210, the JCCT and Goma had agreed to a ceasefire and to allow the SAF forces a safe withdrawal from the area (PNP BOI, 2015). This would be enacted by creating physical space between the forces. However, implementing the ceasefire would prove to be challenging as communications were sporadic and not all hostile forces pledged allegiance to the MILF commander. Though word of the ceasefire did spread, it would take much time to implement.

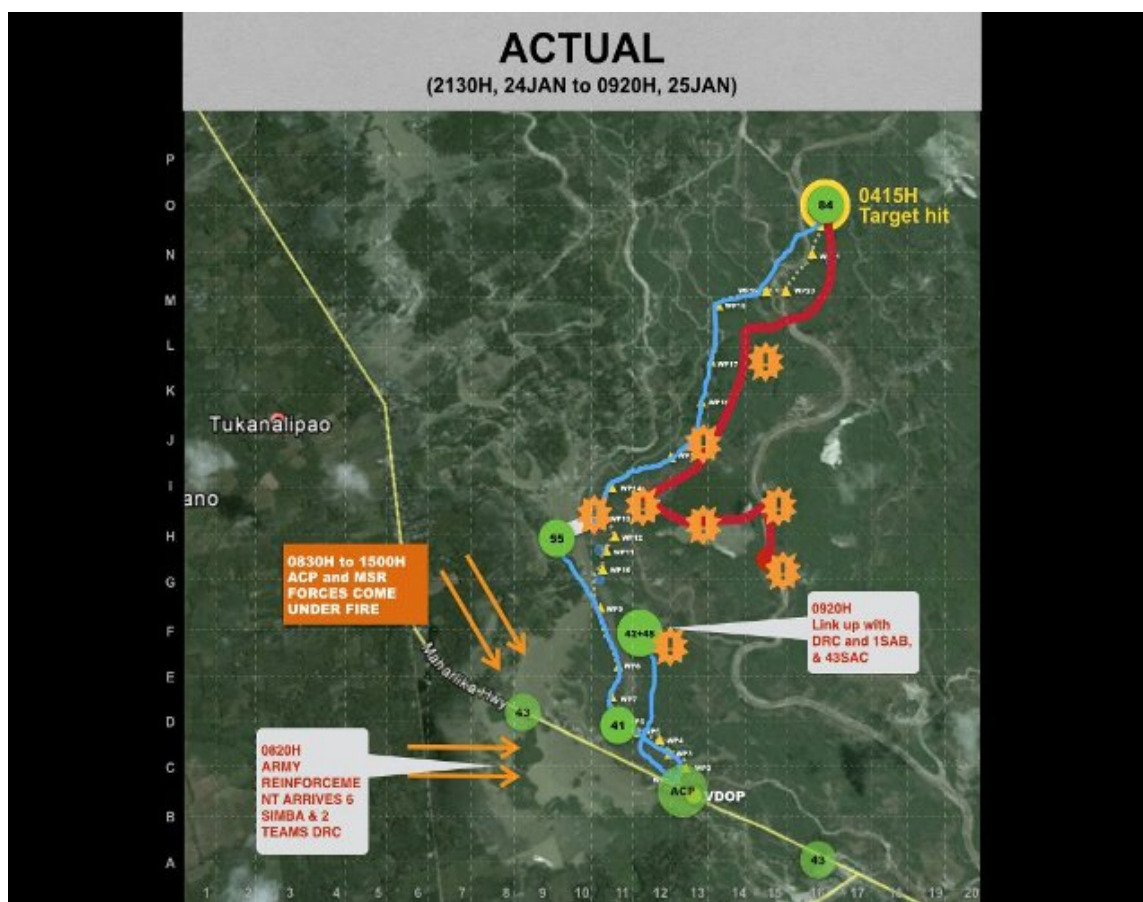
The 84th SAC had been dealing with sporadic engagements since it left the target. Upon hearing pleas for help from its blocking force, the 84th SAC moved to support the 55th SAC's position (PNP BOI, 2015). On the way, the 84th SAC received overwhelming fire. With several casualties and unable to break through the enemy forces, Police Superintendent Raymond Train called for artillery support at 1100 (PNP BOI, 2015). At the same time, he received a text from the TCP to cease fire. The firefight was subdued for an hour, and then the hostile force reengaged. The 84th SAC managed to maneuver to a hut where it was not being shot at. Half of the team stayed while the other half pushed forward towards the river. At the river, the force was pinned down by heavy rifle and mortar fire. At 1300, Superintendent Train again called for artillery and reinforcements (PNP BOI, 2015). Outgunned and unable to move, the men on the riverbank bid farewell and uttered their last thoughts. The superintendent recalled hearing

his men say “I love you mommy,” “I love you baby, and I love you Seaborne” (PNP BOI, 2015). By 1400, nine of his men lay dead and 13 others wounded. At 1748, three white phosphorus rounds were delivered, ending the enemy’s attack. The 84th SAC would stay in place until 2330, when the 42nd SAC and 62nd DRC finally made it to their position (PNP BOI, 2015, p. 22).

The ceasefire was enacted thanks to the work of two teams from the JCCT. They arrived at the engagement zone at 1400 to implement the ceasefire face-to-face with local fighters (PNP BOI, 2015). By 1748, when the white phosphorus was delivered, many hostile fighters had already left the area. By nightfall, SAF was given safe passage out of the area and neutral parties were allowed to recover the dead.

The events previously described in this section are plotted in Figure 5.

Figure 5. The Actual Encounter of PNP-SAF in OPLAN: Exodus



Source: PNP BOI (2015).

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### III. ORGANIZATIONAL STRUCTURE

Strategy is not the consequence of planning, but the opposite: its starting point.

—Henry Mintzberg

Mintzberg (1981) simplifies organizational structure by identifying an organization in terms of five parts: the strategic apex, middle management, the operational or technical core, technical support staff, and administrative support staff. The same study indicates that the relative size and control of these five parts of the organization as a whole can be classified based on the organization's dominant coordinating modes. Mintzberg offers four primary archetypical organizations: the simple organization, machine bureaucracy, professional bureaucracy, and adhocracy (Mintzberg, 1981). This study will emphasize the additional fifth type, a divisional organization, which is a conglomerate composition of multiple and independent sub-organizations, which could be of different types depending on their role in the broader organization (Mintzberg, 1981; Jansen, 1993).

The study of the Mamasapano incident drives the sort of organization that I see. Considering the PNP-SAF as the focal organization, it seems clear that it exists somewhere between Mintzberg's archetypes of the machine bureaucracy and the professional bureaucracy; the SAF clearly has too much training within the operational core and also less formalization than would be expected in a typical machine bureaucracy, but also too many layers of middle management and too little vertical decentralization to fit the type of a professional bureaucracy.

If I change the scope of the study to include the entire Philippine government security apparatus, which is appropriateness to make the case, we see a clearly divisional organization with largely autonomous sub-organizations—the Armed Forces, the National Police, the Department of the Interior and Local Government—which are only interdependent in the broadest sense. Nonetheless, this view is appropriate considering that President Aquino, the very top of the strategic apex of the Philippine government,



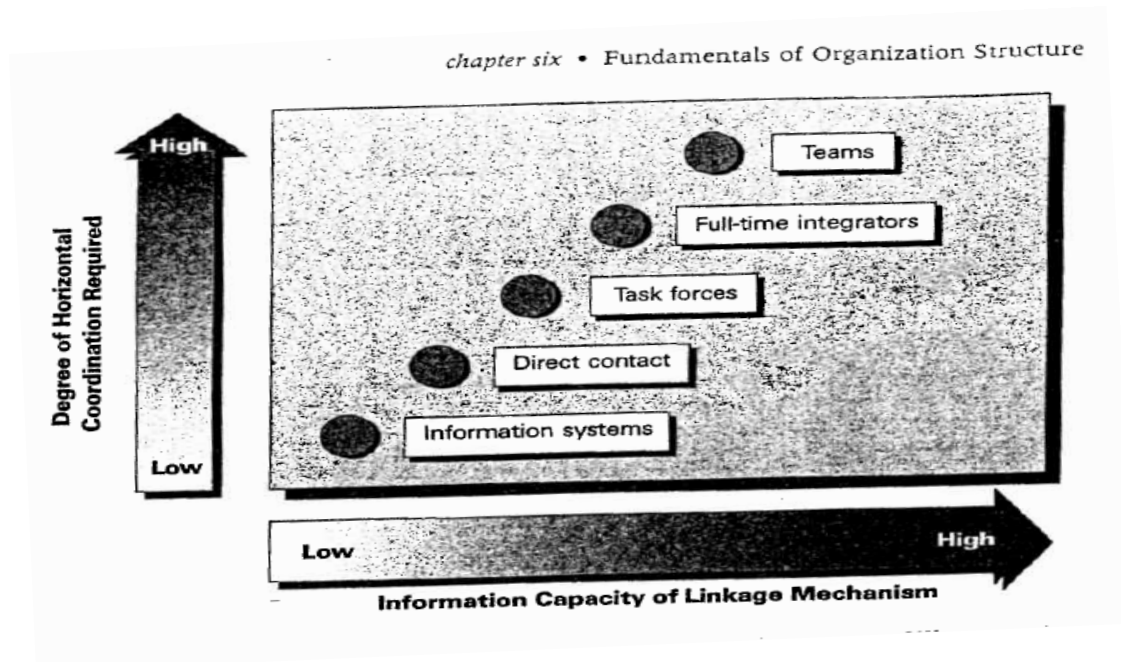
was personally involved in the planning and approval of OPLAN: Exodus. That tactical leaders within the SAF considered their organization this way is also evident in OPLAN: Exodus. Police Superintendent Raymond Train testified to the PNP BOI on the incident that “the first planned mitigating action for OPLAN: Exodus was indirect artillery fire support from the AFP” (PNP BOI, 2015, p. 27). The second planned mitigating action was “the commissioning of the peace process mechanisms to facilitate ceasefire” (PNP BOI, 2015, p. iii). The fact that mission critical support for the operation came from outside the PNP shows that what was critically needed, but was in fact non-existent, was an adhococracy—a task force organization which could integrate the SAF and AFP in such a way that the planned support (artillery, quick reaction forces, and ideally medevac and close air support as well) arrived in a tactically relevant amount of time.

Obviously no such adhococracy existed. CPNP Purisima defied President Aquino’s directive to coordinate with the AFP in advance, and when the ground force sustained heavy contact and initiated their planned mitigating actions, calling for artillery fire at 0730, that call went unanswered by the AFP (PNP BOI, 2015). In fact, artillery support did not arrive for over ten hours. By the time the rounds came at 1748, the majority of the assault and blocking forces from the SAF were already dead or dying (PNP BOI, 2015, pp. v, viii).

#### **A. COORDINATING MECHANISMS**

An alternative way to frame the failure of OPLAN: Exodus is to focus on the coordinating mechanisms between the SAF and both the AFP and the CCCH. Figure 6 depicts the information capacity of various linkage mechanisms against the degree of horizontal coordination required (Daft, 2004).

Figure 6. Degree of Horizontal Coordination Required vs. Information Capacity of Linkage Mechanisms



Source: Daft (2004).

In order for the SAF and AFP to function as a properly integrated whole, with the latter providing at a minimum timely and accurate artillery fire, and ideally medevac and rotary wing fire support as well, direct contact between the SAF and AFP seems to be the minimal linkage mechanism. This existed once members of the SAF command element linked up with members of the 1st MIB at 0700 on 25 January; by that time the ground forces were already in pitched battle and the required support—immediate artillery—was unavailable (PNP BOI, 2015). Accounts vary as to why the artillery fire was delayed; most likely the initial delay was physical preparation of the artillery batteries, and by the time the batteries were actually on standby, Colonel Del Rosario of the 1st MIB had been told not to provide artillery support by his superior, Major General Pangilinan of the 6th ID (PNP BOI, 2015, p. 27).

The chain of events related to the requests by the SAF for artillery support and the failure of AFP to provide the requested support is a tragic demonstration of what Richard Daft would likely describe as linkage mechanism overload. By practicing “time-on-target” notification for the AFP, the SAF ignored how much additional information

would need to be passed in order to receive artillery support. Rather than needing to pass a simple message, something like “assault and blocking forces under heavy contact, request immediate artillery support at the following locations...” (PNP BOI, 2015, p. 27), the SAF liaisons instead needed to pass a tremendous amount of information at once: the target location, the disposition of friendly and enemy forces, and the approval chain for this operation. This flood of information overwhelmed Colonel Del Rosario and he consulted his commander (Major General Pangilinan) for guidance, who authorized mechanized and infantry support, but not the critically needed artillery (PNP BOI, 2015, pp. 27–28). Furthermore, the SAF ignored valid requirements of the armed forces. It is unlikely that AFP artillery batteries are always maintained at full readiness, and because the AFP had no prior knowledge of the operation there is no reason to believe that their batteries would be on standby.

Had the armed forces been represented on the task force in the planning stages, methods to maintain operational security while establishing viable linkage mechanisms could have been found. With approval and the directive to coordinate with the AFP coming directly from President Aquino, CPNP Purisima could have gone to the level of AFP command that he deemed appropriate, either at the Secretary of Defense level or as low as the Brigade level.

While a properly manned task force would likely have been sufficient, the ideal linkage mechanism would be to have both full-time integrators—liaisons between the PNP-SAF and key AFP command staffs—and integrated teams including military fire support, medevac, and communications experts participate on SAF tactical teams. Joint integration would allow the SAF to bring full military support to bear in future high-risk domestic law enforcement operations. This solution does not necessarily entail the operational security concerns that previous ad hoc joint operations have demonstrated, because a small number of individuals could be selected for joint operations, allowing them to be vetted for operational security concerns.

## **B. WORKFLOW INTERDEPENDENCE**

A third way to consider the organizational failure that led to the failure of OPLAN: Exodus is to consider the case in terms of workflow interdependence. Daft describes Thompson's model of departmental interdependence as consisting of three main types: pooled, sequential, and reciprocal, which represent a spectrum of increasing interdependence and therefore an increasing need for communication and thus stronger horizontal linkage mechanisms to facilitate that communication (Daft, 2004). Again, if we consider the organization to be the Philippine government's security apparatus and the various organizations (AFP, PNP-SAF, and CCCH) to be departments within that broadly defined organization, I assessed that the planning stage of OPLAN: Exodus fits the model of pooled interdependence. The SAF required minimal or no coordination beyond existing knowledge of AFP and CCCH capabilities in order to plan the operation. From this perspective, the failure of the mission hangs on the fact that senior leaders within the SAF and PNP failed to recognize that during execution of the operation, interdependence would rapidly transition to reciprocity, requiring dramatically different horizontal linkages and communications practices to coordinate closely overlapping (geographically) and time-sensitive effects from the AFP and CCCH necessary for the success of OPLAN: Exodus.

The time-on-target notification scheme practiced by the PNP did not allow the AFP and CCCH to be adequately prepared to play their planned role in the operation. Moreover, it also assumed that the horizontal linkages and information flow required to achieve supporting effects (artillery/close air support and ceasefire negotiations) could be created instantaneously; obviously they could not be. A more realistic approach to balance the requirement for operational security during the planning phase and early in the execution phase with the need for real-time information sharing during the operation would have been a time phased notification plan that informed senior AFP leadership shortly before execution (12–24 hours in advance), allowing the AFP time to verify presidential approval of the operation and prepare supporting forces, particularly artillery companies and medevac assets, while affording the SAF the ability to cancel the operation if mission critical supporting assets were unavailable. Time-on-target

notification could have been practiced for the CCCH/AHJAG, though it is unclear whether this would have had a noticeable effect on their ability to affect a ceasefire due to dubious control of the MILF and BIFF leaders with whom the CCCH/AHJAG was communicating.

### **C. CULTURAL ANALYSIS**

According to the PNP BOI, OPLAN: Exodus was the tenth operation in a series of unsuccessful operations targeting Marwan (PNP BOI, 2015) (shown in Figure 4). In addition, from the report, previous operations involved cooperation between the Philippine National Police and the Armed Forces of the Philippines (PNP BOI, 2015). Accordingly, the PNP BOI and the Philippine Senate inquiry point out that the first two operations, Pitas and Smartbomb, were executed but failed to capture Marwan because he escaped the target area hours before the operations, which SAF leadership, particularly DSAF Napenas, ultimately attributed to operational security leaks within the AFP (PNP BOI, 2015; Philippine Senate Committee, 2015). Four more operations (Wolverine I, II, and III and Terminator II) were aborted, due either to lack of support from the AFP or because there was evidence of compromise early in execution (PNP BOI, 2015). Terminator II is a particularly vivid example: the SAF aborted the operation because they encountered heavy resistance along their infiltration route, which they suspected was because leaks within the AFP had placed insurgent groups on high alert. The combined result of this five-year string of failed operations was that the SAF developed intense distrust of the AFP, particularly their ability to maintain operational secrecy from the MILF.

Further fueling the mistrust between the PNP and AFP, the Army's 6th ID Mechanized Brigade attempted and failed to capture Marwan and Usman on 30 June 2014 without coordinating with the SAF despite the ongoing intelligence and planning coordination for the Terminator series of operations (PNP BOI, 2015). The 6th ID's operation was clearly based on the intelligence that had been shared by the SAF to support a combined operation. In his testimony to the Philippine Senate's investigating body (Philippine Senate Committee, 2015), DSAF Napenas stated that "whenever the

AFP is involved in targeted operations against high-level leaders information and preparations of the operations are leaked because members of the MILF who protect the targeted individuals have contacts within the AFP” (Slaverria, 2015).

#### **D. CONCLUSION**

DSAF Napenas and CPNP Purisima briefed the president on OPLAN: Exodus. The PNP BOI (2015) confirms that the president directed them to coordinate with the AFP, but the two disregarded his order and continued with their own plan for time-on-target notification. In so doing, they revealed both their mistrust for the AFP and over-confidence in the capabilities of the SAF. They also failed to recognize the impacts that time-on-target notification would have on the support that the AFP and CCCH would be able to provide for the SAF operation and the monumental communication load that they were placing on their poorly considered coordination mechanisms. Could a small task force with a handful of full-time integrators from the armed forces have bridged this gap while maintaining operational security? Perhaps. Instead, the tragic death of 44 elite SAF commandos stands as a testament to inadequately considered organizational design.

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## IV. ANALYTICAL NARRATIVES

Strategy depends for success, first and most, on a sound calculation and coordination of the end and the means.

—B. H. Liddell Hart

A General who wins a battle makes many calculations in his temple ere the battle is fought. The general who loses a battle makes but few calculations beforehand. Thus, do many calculations lead to victory and few calculations to defeat: how much more no calculation at all! It is by attention to this point that I can foresee who is likely to win or lose.

—Sun Tzu

This chapter analyzes the events using Game Theory and MADM using the AHP method. This chapter also identifies the hierarchy of decisions and the best possible solution or solutions. Using different attributes, the study will simulate the commanders' decision making process, especially the leaders of the PNP-SAF during OPLAN: Exodus. They encountered a strategic dilemma when the commando mission failed during extraction and began to consider the importance of coordination with other units. This analysis will determine at what points during Operation: Exodus coordination should have been done. The determination of criteria to identify what should have been considered during those critical decision points can resolve some confusion and controversy that surround this mission.

Robert Bates defines analytical narrative as an approach “to combine analytic tools employed in economics and political science which consist of range of models that could serve as the basis to extract explicit and formal lines of reasoning, which facilitate both exposition and explanation” (Bates et al., 1998). This chapter presents Game Theory and AHP as an analytical methodology to identify important attributes of decision making, by providing a rationale based on the reports and government inquiry. All of the elements of the dataset in determining criteria are derived and extracted from the critical points of the PNP and Philippine Senate investigation of the Mamasapano case.



## **A. GAME THEORETIC APPROACH**

I emphasize the decisions of the leader in the complex situation of the mission. First, I focused on the organizational structure of the OPLAN: Exodus, which was discussed in Chapters II and III. This approach is said to be “ideal for strategic situations where competitive or individual behaviors can be modeled” (Dixit & Nalebuff, 1991). Game theory helps to analyze a strategic element from the critical decisions involved in OPLAN: Exodus.

According to Dixit and Nalebuff, “there are different types of strategic thinking and these are said to be the diverse contexts of art and science of this theory” (1991, p. ix). The methodologies for this approach, according to Mitchell Osak, “are not without their shortcomings which need to be considered in the strategy development process” (2010). Dr. William P. Fox explains that game theory assumes the players act rationally and in their self-interest (2015). However, Osak has said that “we know that as humans, this is not always the case” (2010). Furthermore, according to Dr. Fox and Dr. Giordano (2015), game theory “assumes players act rationally more than strategically and consider the competitive responses of their actions.” Finally, Osak (2010) also emphasizes “that our experience tells us that not every manager thinks within a strategic context” (Osak, 2010). He adds “that game theory is most effective when leaders understand the expected positive and negatives payoffs of each of their actions.”

## **B. APPLYING GAME THEORY TO OPLAN: EXODUS**

After the logical analysis from the organization theory that I applied in Chapter II and Chapter III, the analysis of events and the account from investigation reports are the basis in applying Game Theory. The strategy of coordination was the important decision that was given less priority according to the investigation reports. However, there are many strategies that could be applied in this operation. This study will limit the strategies used by the players in the game, and based upon the possible outcomes, I used a partial conflict game. A partial conflict game is a game in which two players are not diametrically opposed and the sum of the payoffs for playing strategies does not always sum to zero or the same constant,  $C$ . Thus, players can both win or both lose something in

a partial conflict game. Game Theory can be used to model such strategy of the rational actors as was used in OPLAN: Exodus. A logical game can be created based on the critical strategies in the Mamasapano case. By studying a two-player game that evolved between the PNP-SAF and the enemy, I will stressed the strategic aspects of the participants. My study especially examines the decision maker in obtaining an outcome with better payoffs. It is the payoffs of the strategies of each player in regard to his decision making that is utilized in the partial-sum game,<sup>4</sup> such as in the prisoner's dilemma or cooperation game.<sup>5</sup> In our game, I found and analyzed the Nash Equilibrium.<sup>6</sup> I developed a simple example of a Game Theory application through a two-player cooperation game. In this game, There are two opposing players: player 1 (the row player) represents the PNP-SAF while player 2 (the column player) represents the enemy of the government (i.e., this includes the MILF, BIFF, and other private armed groups mentioned in the culture of "Pintakasi" (p. 40). I assumed both players were rational players. This implies that each player desires the best outcome that he can achieve in the game as measured by the values of the outcomes. Each player has numerous strategies that they can employ in the game. Next, I strategized the player's game.

START OF GAME THEORY: Two-player in a partial-sum simultaneous game without communication (Fox & Giordano, 2015).

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<sup>4</sup> According to Dr. William P. Fox and Dr. Frank R. Giordano (2015), "Partial-sum (non-zero sum) game, the payoffs of the players are not strictly opposed. The success of one player does not always mean failure for the other. As the interests of the players are not totally in conflict, such a game offers the opportunities for cooperation in order to achieve mutually advantageous outcomes. These opportunities do not rule out the competitive side of the game. Players still want to achieve their best possible outcome. Cooperation requires communication in order to achieve some coordinated strategy. As communication is the key component, partial-sum will be analyzed with three different assumptions. The game can be played: 1) Without Communication, 2) With Communication before the game, 3) With Cooperation."

<sup>5</sup> According to the same source, the prisoner's dilemma is a non-zero sum game that chooses strategy based on a conflict between individual or group rationality. "Confess or not confess" (Cooperative strategy) (Fox & Giordano, 2015).

<sup>6</sup> "Nash equilibrium in game theory is a solution concept of a non-cooperative game involving two or more players, in which each player is assumed to know the equilibrium strategies of the other players, and no player has anything to gain by changing his own strategy" (Fox & Giordano, 2015).

In a partial sum game as opposed to a total conflict game, the partial-sum (non-zero-sum) game assumes that “the payoffs of the player are not strictly opposed as they would be in a total conflict game” (Fox & Giordano, 2015). Thus, “the success of one player does not mean failure for the other” (Fox & Giordano, 2015). Therefore, a game theoretical framework is used initially to begin the analysis of OPLAN: Exodus.

In the game, there were two players: the PNP and the Enemy. For our simple strategies for the players, I assumed that they can choose to “Coordinate with the AFP” or “Not to coordinate with the AFP.” Thus, both sides could have coordinated or chosen not to coordinate with the government.

These represent the game in the following description. First, I defined the strategies for the players:

Player 1 (PNP-SAF) strategies are:

Coordinate with the AFP (R1)

Not to coordinate (R2)

Player 2 (Enemy of the government) strategies are:

Coordinate with the AFP (C1)

Not to coordinate (C2)

I let  $(m_i, n_i)$  represent the payoffs for each player based upon the strategies chosen. Since the sum of  $m_i + n_i$  is not always zero or the same constant,  $C$ , as I will later show, I have a partial conflict game (see Figure 7) (Fox, 2016).

Figure 7. Partial Conflict Game

		<b>ENEMY</b>	
		C1	C2
<b>PNP</b>	R1	$m_{1,n1}$	$m_{1,n2}$
	R2	$m_{2,n1}$	$m_{2,n2}$

### The Outcomes as Ordinal Values

Initially, I started by obtaining the ordinal rankings of the outcomes to help in determining the possible payoff values. Ordinal values only tell which outcome is better—not how much better (Fox, 2016). For example, in a race between four persons the order of the runners finishing is 3, 2, 1, and 4. Thus, I might assign person 3 the value “4,” person 2 the value “3,” person 1 the value “2,” and person 4 the value “1.” These values only indicate positions.

#### (1) Player 1 (PNP-SAF)

- R1C1 is the Best

If both the PNP and the Enemy coordinate with the government, there is no encounter.

- R1C2 (2nd Best)

If the PNP-SAF coordinates with the AFP and the Enemy does not coordinate and chooses to attack, the PNP-SAF will lose something while the Enemy will gain a payoff.

- R2C1 is the best strategy for PNP-SAF (3rd Best)

If the PNP-SAF does not coordinate with the AFP, the enemy will choose not to attack during the operation. This is the deception strategy, where the PNP-SAF is attracted to higher payoffs. This strategy was expected by the decision maker during OPLAN: Exodus because of high return. There was no coordination with the AFP and the enemy is believed to be cooperative. The risk is known, but the player (PNP-SAF) would choose this where the player has a 5 payoff. (The 5 payoff is the units deployed.)

- R2C2 (Worst)

If both parties will not coordinate with the AFP, each will have the uncooperative payoff. With these strategies an engagement is imminent and casualties from both parties are expected. This is believed to be the worst case scenario. Payoff for each party will be greater risk.

(2) Player 2 (Enemy)

- C1R1 is the Best

These strategies provide equal outcomes, so the enemy will be indifferent to what the row player does.

- C2R2 is 2nd Best

If both players do not coordinate with the AFP, each will have an uncooperative payoff. The enemy will attack and the PNP-SAF does not coordinate with AFP, and so the expected risk is much greater to the PNP-SAF but more advantageous to the enemy.

- C2R1 is 3rd Best

The Enemy will choose the strategy not to coordinate with the AFP, which means the Enemy will not cooperate and will attack. The PNP-SAF chooses to coordinate with the AFP, which will have some casualties.

- C1R2 is Worst

This leads to an encounter where the Enemy cannot control the outcomes. The Enemy can expect more casualties.

Figure 8 illustrates the choices of the players to *coordinate* or *not to coordinate*. The choices are ranked from worst to best. This is followed by the movement strategy of the players making each player's alternatives.

Figure 8. Alternatives and Ranking Diagram followed by the Movement Diagram of Strategy

		ENEMY		<b>R1: Coordinate with AFP</b> <b>R2: Not to coordinate</b> <b>C1: Coordinate with AFP</b> <b>C2: Not to coordinate</b>
		C1	C2	
PNP	R1	<i>(Best, Best)</i>	<i>(2<sup>nd</sup> Best, 2<sup>nd</sup> Worst)</i>	
	R2	<i>(2<sup>nd</sup> Worst, Worst)</i>	<i>(Worst, 2<sup>nd</sup> Best,)</i>	

We will start with values from 1 (Worst) to 4 (Best) for each player.

(NO DOMINANT STRATEGY)

		ENEMY		<b>R1: Coordinate with AFP</b> <b>R2: Not to coordinate</b> <b>C1: Coordinate with AFP</b> <b>C2: Not to coordinate</b>
		C1	C2	
PNP	R1	<i>(4, 4)</i>	<i>(3, 2)</i>	
	R2	<i>(2, 1)</i>	<i>(1, 3)</i>	

(DOMINANT STRATEGY IS TO COORDINATE WITH AFP)

The values 1–4 only show relative utility. I used a movement diagram to look for a pure strategy Nash equilibrium. I found it at R1C1 (4, 4). However, ordinal ranking only provides part of the story; I must convert to cardinal values. Cardinal values are values that provide the “how much better or worse one value is compared to another value.” It is much better, for example, to use something like the times finished in a race for the utilities. Using cardinal values I know how much better or worse one outcome is versus another outcome.

In this example, I used as the utility a scaled value for the units used or units lost in the scenario. I also defined these positions in terms of the players. I decided to use the Method of Morgenstern and von Neumann (Straffin, 2004, pp. 49–53.)

For the PNP, I used a scale from 0 (Worst) to 10 (Best). I found it by the lottery method that 2nd Best is 3 and 3rd Best is 3. For the Enemy, a scale from 0 (Worst) to 10

(Best) was chosen. Again using the lottery method, I found 2nd Best was 7 and 3rd Best was 4. I replaced the ordinal ranking with these cardinal utility values (Figure 9).

Figure 9. Alternatives with Cardinal Values

		<b>ENEMY</b>	
		<b>C1</b>	<b>C2</b>
<b>PNP</b>	<b>R1</b>	(10,10)	(6,4)
	<b>R2</b>	(3,1) <i>Best for</i> <i>PNP SAF</i>	(0,7) <i>Actual</i> <i>Event</i>

Again, our Nash equilibrium is at R1C1 (10, 10). This is the same position but the values have better interpretation in terms of scaled benefit to the players.

I also analyzed the PNP BOI report<sup>7</sup> and could have used the actual event to obtain the utilities for the positions (PNP BOI, 2015). This is explained in the following paragraphs.

I gave cardinal values of 1 and 5 as the utility for the PNP-SAF, representing their units employed for the mission including all the support units (PNP BOI, 2015). Considering the units presented in Chapter II, I simulated the units as the utility employed during the OPLAN: Exodus. For the enemy, I measured success by the number of casualties they inflict on the PNP; I gave the ratio from 0 to 4.4 to represent the ratio,

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<sup>7</sup> The PNP BOI report was limited to interviews of some personnel and leaders. The cardinal values are based on a limited interpretation using the units involved during the operation. This would be supplemented if there was an actual interview and survey from personnel involved in the operation.

where no casualties get 0 and the 4.4 as the 44 PNP-SAF killed during the failure of the OPLAN: Exodus. The PNP-SAF started with 1 unit as the utility representing the PNP-SAF seaborne company as the actor in their planning and execution phase as the main effort for the mission (PNP BOI, 2015).

In the study of behavior in OPLAN: Exodus, third, reset a  $2 \times 2$  game using the partial conflict simultaneous game without communication to actual events. The strategies that I assumed from the theoretical game are based on the uncertain conditions under which the leaders were operating. I prioritized the resulting outputs and find that the best strategy of choice should be **R1C1**, where the PNP-SAF coordinates with the AFP and the Enemy coordinates so that it would not attack the government during the execution of OPLAN: Exodus. This did not happen. Instead, **R2C2** represents the actual strategies employed, where the result is the uncooperative payoff for both parties. **R2C1** was the expected and planned strategy, which the PNP-SAF should have executed. Based on the reports, it would have given them a payoff of 5 and the Enemy 0. The game matrix and the payoff polygon are provided in Figure 10 and Figure 11, respectively.

Figure 10. Strategic Movement Diagram

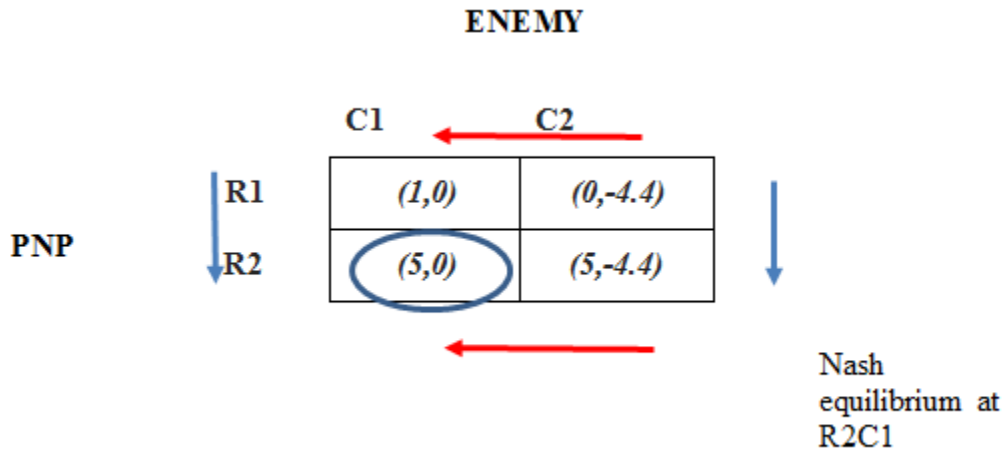
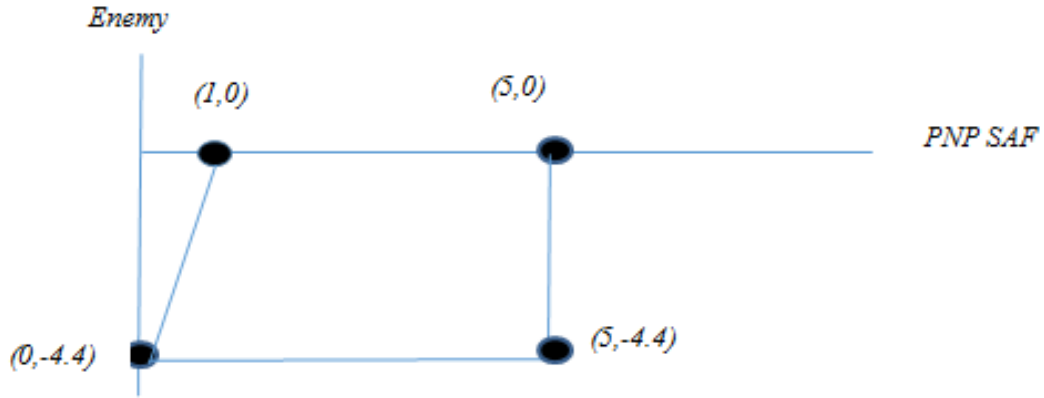




Figure 11. Game Model: OPLAN: Exodus



The payoff polygon of the actual game illustrated in Figure 11 depicts the payoff of the PNP-SAF on the  $x$ -axis, and the  $y$ -axis depicts the payoffs of the Enemy. The pure strategy solution (5, 0) represents the point that is further north and east on the payoff polygon. This would represent a Pareto optimal solution.

According to Baron (2013), a pair of strategies  $(X^* \in S_n, Y^* \in S_m)$  is a Nash equilibrium<sup>8</sup> if

$$E_1(X^*, Y^*) = X^* A Y^{*T} \geq X A Y^{*T} = E_1(X, Y^*) \text{ for every } X \text{ in } S_n$$

$$E_{11}(X^*, Y^*) = X^* B Y^{*T} \geq X^* A Y^{*T} = E_{11}(X^*, Y) \text{ for every } Y \text{ in } S_m$$

The pure strategy for the PNP-SAF is found at R2C1, which for them offers the highest payoff if you play their planned strategy. It gains them the five payoffs and none for the Enemy. However, the Enemy in this game played has two strategies in which they will have the zero payoff. Both players have a dominant strategy. I knew that players can shift their strategy during the game. Looking at the movement of the game, the Nash equilibrium is at R2C1, which is the pure strategy of the PNP-SAF. It is the most

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<sup>8</sup> The pure strategy is the Nash equilibrium with certain considerations (Baron, 2013).

attractive and perceived strategy for the PNP-SAF. Yet, it still has a less preferable outcome, so the Enemy will shift its strategy. The Pareto optimal<sup>9</sup> solution for the game is the line from R1C1 going to R2C1, where the outcome for the PNP-SAF will be the possible solution best for this game model. The strategy in R2C1 is unacceptable if they will consider other stakeholders such as the AFP. The cardinal utilities that are identified in this game are important to devise the risk probability using the Von Neumann and Morgenstern Theorem.

There is a stark contrast between what happened, what was supposed to happen, and the theoretical results presented. This attests to the benefit of doing analysis prior to execution of the mission.

### **C. THE VON NEUMANN AND MORGENSTERN THEOREM**

After the cardinal utilities are identified using the last data as our payoffs, I applied the best strategy methods from Game Theory. I can model rationality behind the risk outcomes using the Von Neumann and Morgenstern Theorem. According to Jonathan Levin, “the von Neumann-Morgenstern Utility Theorem (VNM-Utility) will show under certain axioms of rational behavior, a decision maker faced with risky outcomes of different choices will behave as if he is maximizing the expected value of some function defined over the potential outcomes at some specified point in the future” (Levin, 2006).<sup>10</sup> For this research, I used the von Neumann-Morgenstern Theorem to identify the risk outcome and determine how the decision maker maximizes the utility for his strategy.

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<sup>9</sup> The Pareto principle was invented by economist Wilfredo Pareto to define “the acceptable solution of game , where the outcome should be Pareto Optimal which defines where neither player can improve payoff without hurting (decreasing) the other player” (Business Balls, 2000).

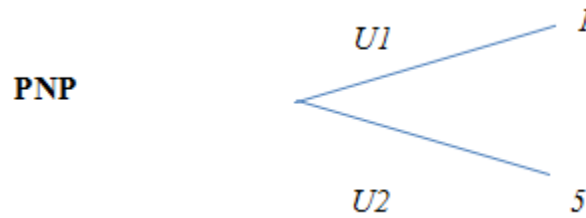
<sup>10</sup> Levin’s method using the von Neumann-Morgenstern Utility Theorem is “to consider the foundations of such model, and then use it to develop basic properties of preference and choice in the presence of uncertainty: measures of risk aversion, rankings of uncertain prospects, and comparative statics of choice under uncertainty” (Levin, 2006, p. 1).

The von Neumann-Morgenstern method is to define the utility of  $X_i$  as the expected utility that the player considers equally desirable.

$$U(X_i) = \pi \cdot U(X_n) + (1 - \pi) \cdot U(X_i)$$

If applied in this game model (Figure 12):

Figure 12. PNP Utility Using the von Neumann-Morgenstern Theorem



The choice of utility in Figure 12 uses both 1 and 5 to represent the units of the PNP-SAF that were deployed during the actual execution (see Chapter II). These are utilities based on the actual units involved in the OPLAN: Exodus.

To achieve the probability to be used for von Neumann-Morgenstern Theorem, I will use the Bayes Rule:<sup>11</sup>

$$\begin{aligned} \text{Probability } (U1 \text{ } U2) &= P(U1/U2) P(U2) / (P(U1/U2) P(U2) + P(U1/U2) P(U2)) \\ P(U1 \text{ } U2) &=.03125 \end{aligned}$$

where  $q$  = probability; and  $X3$  with  $(1-q)$  probability

$$\text{Expected value, } E[U1] = q \cdot U(X2) + (1-q) \cdot U(X3)$$

$$\text{Expected value, } E[U2] = q \cdot U(X2) + (1-q) \cdot U(X3)$$

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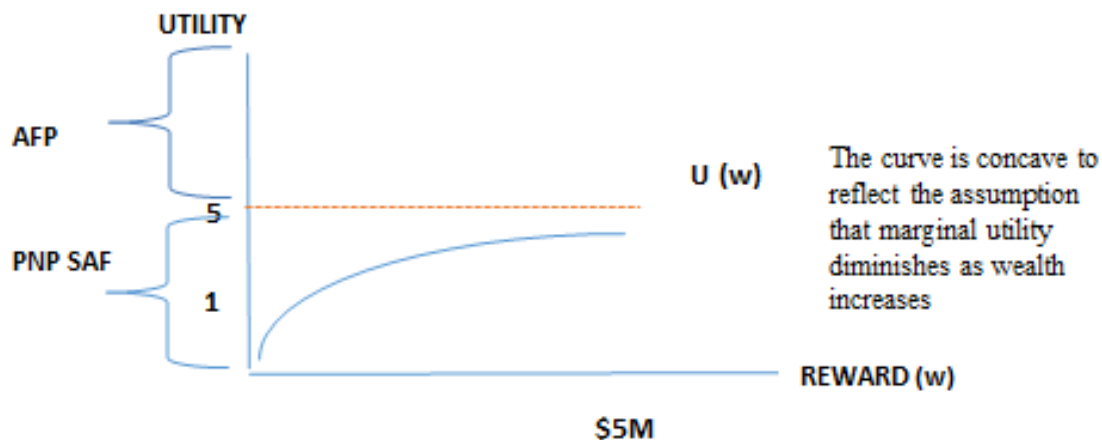
<sup>11</sup> “In probability theory and statistics, Bayes’ theorem (alternatively Bayes’ law or Bayes’ rule) describes the probability of an event, based on conditions that might be related to the event” (Trinity Education, n.d.).

Thus,  
 $E[U1] = 1$   
 $E[U2] = 5$

If I will apply Levin's procedure "Von Neumann Morgenstern axioms of behavior in uncertain situations," the player (PNP-SAF) acted as "if they choose the option that maximizes the expected value from the von Neumann-Morgenstern index" (Levin, 2006). However, the assumption that the marginal utility of prize falls as it grows. Let us consider the units are used as the utility; the previous sample started with 1 unit of PNP-SAF and it was set to increase the unit of PNP-SAF by five (5), as detailed in Chapter II. Then the prize of the high-value target is \$5M, which enables the decision maker to gamble on the mission (PNP BOI, 2015). As I used the von Neumann-Morgenstern utility index, I saw that it reflects how players feel about the value of money. For OPLAN: Exodus, it is the reward offered by the U.S. State Department for the killing or capture of the high value targets.

By making a graph of the game (see Figure 13), the decision maker took the expected value from the mission, which applies the variability of the outcome of the activity of the PNP-SAF.

Figure 13. Risk Aversion Graph Shows the Utility When Wealth Increases



Source: Risk-Aversion (2006).

The player (PNP-SAF) will prefer the reward to other gain outcomes with their fair units, which is exactly how the PNP-SAF acted in Mamasapano. The PNP-SAF will also prefer the small utility rather than using other units like the AFP to accomplish the mission.

Thus we can conclude that the decisions made in OPLAN: Exodus were highly risk averse and decision makers refused other utilities, such as cooperation, just as they did in the simulated game. The curvature of the utility function determined this as the curvature increased so did the degree of Risk Aversion. Considering the utility index from the von Neumann-Morgenstern Theorem I see the strategic outcome that the player would choose by avoiding a gamble; but, the player would like to gain more on the reward. As for normal characteristics of Risk Aversion shown in the graph (Figure 13), as the wealth or the reward increases, Risk Aversion also increases for the decision maker (Levin, 2006).

To compute the relative Risk Aversion from the game model of OPLAN: Exodus:

$$rr(W) = Wr(W) = -W \cdot U'(W)/U''(W)$$

*If we use the 1 and 5 utility and the reward of \$5M, we have their result:*

$$Rr(W) = Wr(W) = -5$$

Therefore,  $rr(W) < 0$ ; the condition for Risk Aversion is decreasing absolute Risk Aversion, but as the monetary reward increases more assets are held at risk. These conditions and this definition were taken from definitions of “Risk Averse” in economics.

This holds true when I apply it to the OPLAN: Exodus. As the mission became feasible and was executed, the leaders and decision makers tended to increase Risk Aversion, holding onto the unit and defining the ToT scheme. The PNP-SAF did hold during the actual mission by not coordinating and by not coordinating within its own organization and by not coordinating with other government units even in times of uncertainty. This behavior, of course, is not limited to special operations and the military. Even a business scheme is about examining the implications of individuals’ rational self-interest, where self-interest is defined by how they maximize utility in order to gain a desired outcome or payoff.

In economics, many people are said to be risk averse and to prefer the certain reward while avoiding the uncertainty of gambling with their utilities or their outcome (Cooper & Andrew, 1998). When people base their decisions on expected payoffs alone, they may yield unexpected and unfortunate results like that of OPLAN: Exodus. In that operation, the strategies considered are said to have been lacking or good strategies were ignored, leading to the tragic failure.

Again, the Game Theory shows the necessity for analysis of the strategies for each player in a game as well as the expected payoffs for each player. As I have seen, this same type of analysis is valuable if one is to consider options for missions involving decisions between players.

#### **D. A MULTI-ATTRIBUTE DECISION-MAKING APPROACH**

After applying Game Theory to OPLAN: Exodus for the study of how decision makers can obtain their best solutions in a game involving the decisions of two players, we turn our attention to the individual players to determine information relative to the criteria that could have been used. We accept that the strategic decisions the players make will depend on the alternatives, the courses of planning, and the choices each one has. The cooperative game built was just a simple application of game theory so that we could

provide an important analysis of the leaders' choices and commitment to their desirable strategy.

The following application examines a threat risk assessment process and modeling methodology similar to the one presented in the article "Application and Modeling Using Multi-Attribute Decision Making to Rank Terrorist Threats" (Fox, 2016). In this article, Dr. Fox applies multi-attribute schemes to the threat and applies sensitivity analysis to weight the criteria and alternatives. This approach and methodology is applied to the Mamasapano case study. I first determined some criteria and attributes for the decision makers. This analysis utilizes the MADM using the theoretical and practical framework of the AHP. Dr. Fox believes that this method is best for organizations involved making risk analysis decisions where there are more than two alternatives and more than two criteria for the decision. This AHP methodology helps to provide decision makers with information that helps in the process because it helps determine the factors to be considered in decision making and at the same time to identify the factors of failure. In our analysis, we hope to find the factors that contributed to the failure in the case of OPLAN: Exodus.

MADM is a branch of mathematics, according to Dr. Fox and Giordano, "of a general class of Operations Research (or OR) models that deal with decision problems under the presence of a number of decision criteria" (Fox & Giordano, 2016, pp. 18–27). According to course notes, the AHP "is a multi-criteria decision making (MCDM) method that helps the decision-maker facing a complex problem with multiple conflicting and subjective criteria" (Fox & Giordano, 2015). Tsagdis Angelis defines AHP as a decision-making tool of MADM that is currently used in variety of areas ranging from economics, finance, politics, resource allocation, cost/benefit analyses, military and conflict resolution (Angelis, 2008).

## **E. APPLYING MADM USING AHP IN THE CASE STUDY OPLAN: EXODUS**

The following is the procedure that I used in applying MADM using AHP (Fox, 2016).

### **Step 1 Build the hierarchy for the decision.**

I based the criteria of decision as presented in the PNP BOI report, which identifies different alternatives that were used in their planning and execution (PNP BOI, 2015). Table 2 illustrates this approach: “AHP selecting the best alternative based upon pairwise comparisons of the decision criteria similar to the AHP illustrative examples” (Fox, 2016, Ch. 11, pp. 17–30).

In OPLAN: Exodus, the criteria that the leaders have considered in deciding whether to coordinate with the AFP included these three:

*Compromise:* DSAF Napenas believed that the AFP would compromise the mission if the PNP-SAF coordinated with the AFP. He acknowledged this during his meeting with the president on 9 January 2015 (NBI-NPS SIT, 2015, p. 42).

*Time on Target:* This is the critical point of coordination as planned by the PNP-SAF; this is also their contingency plan, reinforcement and containment. Many of the decisions to coordinate rely on this perceived utility that they positively relied on (NBI-NPS SIT, 2015).

*Operation Security:* The other criterion is that the PNP-SAF was the operation security. Prior to OPLAN: Exodus there were information leaks about operations, which led to previous operations being aborted due to compromised operation security while coordinating with other units such as the AFP (NBI-NPS SIT, 2015, pp. 36–39).

I constructed the simple model based on the criteria driving the decision to coordinate with the AFP based upon the AHP methodology (Figure 14). I provided a general framework that can be structured around these three criteria. Thus, Table 1 depicts the model derived from the decision criteria of both the decision makers during OPLAN: Exodus. However, other authors and case analysts can come up with different

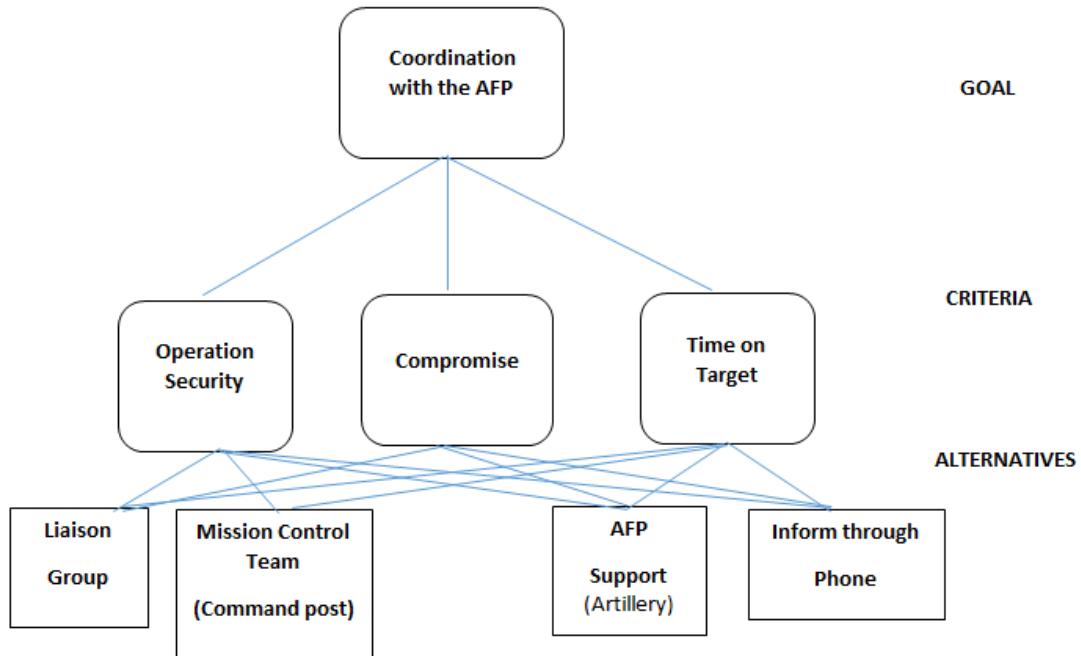


models and approaches. The objective of this research is not to scrutinize other models used during the actual operation nor their selection of criteria for deciding whether the PNP-SAF should coordinate with the AFP or other stakeholders for their mission in Mamasapano. The intention of this study is to demonstrate that the AHP process can be effectively integrated into decision making comparatively with the Game Theory that was applied previously.

Table 1. Table of Hierarchy of Decision Making

<b>Goal: Select the best alternatives</b>	<b>Model</b>	<b>OPLAN: Exodus</b>
Criteria	c1,c2,c3...cm	Compromise, Operation Security, Time on Target
Alternatives	a1,a2,a3...an	<i>Liaison, Mission Control Team, AFP Support, Inform by Phone</i>

Figure 14. PNP-SAF Criteria and Alternatives



**Step 2** Make judgments and comparison.

According to AHP process, Thomas Saaty (2008) suggests building “a numerical representation using a 9-point scale in a pairwise comparison for the attributes criterion and the alternatives.” Dr. Fox (2016) adds, “The goal, in AHP, is to obtain a set of eigenvectors of the system that measures the importance with respect to the criterion.” This is provided in Table 2.

Table 2. Scale of Relative Importance

Intensity of importance	Definition
<b>1</b>	<b>Equal importance</b>
2	Weak
<b>3</b>	<b>Moderate importance</b>
4	Moderate plus
<b>5</b>	<b>Strong importance</b>
6	Strong plus
<b>7</b>	<b>Very strong or demonstrated importance</b>
8	Very, very strong
<b>9</b>	<b>Extreme importance</b>

Source: Saaty (2008).

I made the pairwise comparisons using Saaty's nine-point scale. I used an Excel template provided by Dr. Fox to organize the pairwise comparisons, shown in Figure 15 (Fox, 2016, Ch. 11).

This yields the decision matrix shown in Table 3. Dr. Fox (2016) states that "We check the CR, the consistency ratio, to insure that it is less than 0.1." For our model the pairwise decision matrix, I found the  $CR=0.03827$ . Since the  $CR<0.1$ , I continued and find the Eigenvector for the decision weights (see Figure 15 and Figure 16).

Figure 15. Screenshot of AHP Template for PNP-SAF Coordination with AFP

AHP Analytic Hierarchy Process				n=	3	Criterion																																																																					
Objective				order risk assessment																																																																							
Only input data in the yellow fields!																																																																											
Please compare the importance of the elements in relation to the above objective and fill in the table: Which element in each pair is more important, A or B, and how much more important is it. (Use																																																																											
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Figure 16. Pairwise Comparison Matrix for Coordination

		Matrix 0		
		ToT	Compromise	OPSEC
		1	2	3
1	ToT	1	5	9
2	Compromise	1/5	1	5
3	OPSEC	1/9	1/5	1

Table 3. Eigenvector Decision PNP-SAF Coordination with the AFP

Eigenvector Criterion Weights		
	ToT	0.75789888
	Compromise	0.167495617
	OPSEC	0.074605503

### Step 3 Obtain comparative rankings of alternatives.

Dr. Fox (2016) states that “for the alternatives, we either have the data as we obtained it for each strategy or criterion, or we can use pairwise comparisons by each alternative’s rank by our chosen criteria.” I used a method similar to Dr. Fox’s method in the AHP sample in the car selection (Fox, 2016, Ch. 11). In this part, I obtained the eigenvectors from the criterion in order to obtain a comparative ranking of alternatives similar to Dr. Fox’s methods.

For this research, I have four alternatives: Liaison Group, Mission Control Team (MCT in Table 5), AFP Support Artillery, and Inform by Phone. I also have three criteria: Time on Target, Compromise, and OPSEC. The weights as provided as well as the data for the alternatives after normalizing each value divided by the sum of the values are found (see Table 4 and Table 5).

Table 4. Weights of Criteria Using the AHP Weights

Criteria	Weights
TOT	0.75789888
Compromise	0.167495617
OPSEC	0.074605503

Table 5. Alternatives by Criteria Using the AHP Weights

	ToT	Compromise	OPSEC
Liaison Grp.	0.151266	0.128951355	0.090304
MCT	0.703181	0.087492834	0.128261
Artillery	0.061979	0.064204406	0.065407
Inform by Phone	0.083575	0.719351404	0.716027

**Step 4:** Multiply the matrix of the normalized raw data or pairwise comparison

According to the procedure, next is to multiply the matrix of the normalized raw data or pairwise comparison in the Excel templates to obtain the  $n \times I$  final rankings.

This is displayed in Table 6. We clearly see that MCT is ranked first.

Table 6. Ranking of Criterion and Alternatives Using Eigenvectors

	<b>AHP</b>	<b>Ranks</b>
<b>Liaison Grp.</b>	<b>0.14298</b>	<b>3</b>
<b>MCT</b>	<b>0.55716</b>	<b>1</b>
<b>Artillery</b>	<b>0.06261</b>	<b>4</b>
<b>Inform by Phone</b>	<b>0.23725</b>	<b>2</b>

Thus, the use of the Mission Control Team is our best option according to AHP. This alternative was mentioned in the PNP BOI report; however, it was limited and was not adequately emphasized for communicating with other government units like the AFP (PNP BOI, 2015).

An important aspect of any AHP analysis is sensitivity analysis. I used Equation (a) for adjusting weights which falls under the incremental analysis (Alinezhad & Amini, 2011, pp. 23–28)

$$w_j' = \frac{1-w_p'}{1-w_p} w_j \quad (a)$$

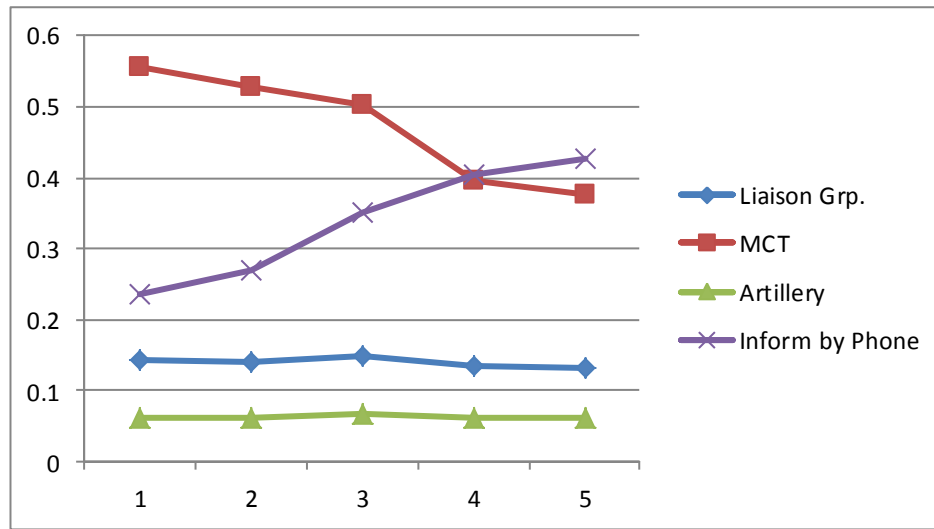
as Fox (2016) states, “where  $w_j'$  is the new weight and  $w_p$  is the original weight of the criterion to be adjusted and  $w_p'$  is the value after the criterion was adjusted.” I found this to be an easy method to adjust weights to reenter into our model. This altered the weights by 0.05 increments until Compromise was no longer the most heavily weighted criteria (see Table 7).

Table 7. Table of Ranks for Alternatives Using AHP

	AHP				
Liaison Grp.	0.14298	0.141269	0.147826895	0.133911	0.132712845
MCT	0.557163	0.527007	0.503920155	0.397335	0.376226049
Artillery	0.062608	0.062737	0.067429621	0.063296	0.063386398
Inform by Phone	0.237249	0.268987	0.351475857	0.405458	0.427674708

For a better interpretation, I displayed four alternatives graphically in Figure 17. From this figure, we see that Mission Control Team (MCT) is the best alternative. It is also seen that Inform by Phone is gaining. The breakpoint where Inform by Phone surpasses MCT is when the weight for MCT decreases by about 26.5 percent.

Figure 17. Sensitivity Analysis



Mission Control Team (MCT) is the alternative with the highest ranking. This suggests the strategic method of coordination with the AFP. I systematically followed the AHP process step-by-step method to obtain all the alternative rankings. By varying the weights, I can determine under what circumstances a different alternative might be best.

As we apply the MADM through AHP, there is a considerable correspondence to what happened during the actual events in the OPLAN: Exodus. The data applied are based on the actual reports and investigation available from open sources. Thus,

following a decision strategy to coordinate with MCT most likely would have altered the events and perhaps prevented the massacre.

#### **F. FUTURE ANALYSIS: SETTING THE LEADERSHIP AND STRATEGIC CRITERIA**

The following models identify criteria that could have been taken into account when assessing missions for special operations forces. These models might have strategic implications in future analysis. The first model is the U.S. Department of Defense (DOD) Joint Publication 3-05 for Special Operational Mission Criteria. The second model is the Christopher Lamb article “Perspective on Emerging Roles and Missions of SOF.”<sup>12</sup> The last that could also be taken into consideration is the model of McRaven for direct action, popularly known as the Special Operations Model. These models provide other good criteria and alternatives for analysis of the decision to use special operations like OPLAN: Exodus in future studies.

In every situation of employing special operations, the decision maker will face challenges in determining how to achieve success; the decision maker may even disregard some important factor to achieve mission success. Such a problem could be to know what guidance is needed for employing SOF units. The leaders have to consider issues in their decision making from the strategic level down to the operational and tactical levels. The commander’s decisions on the ground and the commander at the strategic level will have to know how to resolve the problems and evaluate appropriate potential employment of SOF. Assessing every role and the missions of special operations are also complications to be considered with different solutions. McRaven emphasizes that to address some of these problems we have to provide a tool to assess the viability of a proposed special operations mission (McRaven, 1995, p. 26). The U.S. JCS JP 3-05 also takes this into account and provides “clear guidance to commanders for

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<sup>12</sup> Christopher Lamb’s “Perspective on Emerging Roles and Mission of SOF” is a good model of criteria for leadership guidance for SOF “for judging roles and mission, discussing appropriate SOF roles, and concluding with a review of some rules of thumb to be applied” (Lamb, 1995, p. 199).



planning and executing” special operations missions by setting operational mission criteria (2005, p. vii).

Lamb focuses on the strategic level. He applies three considerations when assessing new roles and missions of SOF: 1) the nature of the threats and the security environment (Security Environment); 2) The national security strategy that the host country is adopting to deal with security environment (National Security Strategy); 3) The nature of the forces—the inherent risk involved (Nature of Forces). These criteria could help construct a hierarchy of decision depending on the leaders’ intent and objectives. Matrixes can be made that include criteria that need to be assessed by leadership to determine the scale of the decision.

The leadership models for special operations that this study has mentioned in the last part are recommendations that should be considered in future planning and decision making. Lamb’s model and the U.S. JCS JP 3-05 are good models for setting criteria to determine the values of consistency for decision makers at the strategic level. Tables 8 and 9 show sample matrixes derived to weigh criteria and alternatives in decision making, which can help leaders determine their objectives and even consider complex decisions like initiating a special operations mission.

Tables 8 and 9 show the tabulated criteria from U.S. JCS JP 3-05 and Lamb’s factors of special operations missions. Both models are guidance for strategic and operational decision making by leaders that should to be reflected when employing forces of special operations. Some examples are the branch of service or organizational weight in considering each criterion. The numerical values below these criteria are simulated Saaty’s weights that correspond to a simulated ranking for MADM.

Table 8. U.S. JCS JP 3-05 Special Operations Criteria

Branch of Service	Appropriate Mission	Support Campaign Plan	Feasibility	Resources	Risk Justification
ARMY	3	2	3	2	2
NAVY	3	2	3	2	2
AIRFORCE	3	2	3	2	3
MARINES	3	4	3	2	3
JSOTF	1	1	3	2	3
INTER-AGENCY	9	9	9	7	9

Table 9. Lamb's Factor of Special Operation as Criteria

Branch of Service	Environment Security	National Security Strategy	Nature of Force
ARMY	3	3	1
NAVY	3	2	1
AIRFORCE	3	3	3
MARINES	3	3	3
JSOTF	5	5	5
INTER-AGENCY	9	9	9

## G. CONCLUSION

The quantitative approach of this study has identified some useful patterns for decision making by analyzing OPLAN: Exodus. Both Game Theory and MADM using AHP are used showing their possible analyses using expected utility in OPLAN: Exodus. In Game Theory, I used the strategic game of cooperation versus non-cooperation using a partial-sum game. The simple choices selected by decision makers in considering risk that will yield the highest payoff may be obtained when both players want to optimize their outcomes. There are many additional strategies not considered by the decision makers or the author that could be added in future analyses that might shed additional

light on the mistakes made In OPLAN: Exodus. The analyses made in this chapter were limited to considering the utilities and the highest payoffs for the players. The results gained from analyzing both players, especially the PNP-SAF, allowed us to derive the risk graph that suggests how the decision maker was risk averse given the utilities and the payoff.

MADM with AHP was used to identify possible criteria and alternatives for leaders to consider. I used the goals, criteria, and alternatives to rank these alternatives, which resulted in the ranking of final alternatives the decision maker had to consider.

In the case study that I am using, the Mission Control Team is the best alternative and the ToT scheme has the initial highest priority of the decision-making criteria. However, the dataset and criteria in this problem are based only on the personal expertise of the author and information extracted from current reports that may be biased. Participation of concerned offices or actual actors involved in OPLAN: Exodus would be needed as the best human resources to conduct an accurate risk analysis and risk assessment. It is our recommendation that this be an area for future research. Despite the insufficient dataset, though, the objective for this chapter is achieved by analyzing the situation of decision makers using Game Theory analysis. Additionally, this study mentions some criteria that should have been considered based upon the mission. Some insights from different scholars could also be a guide for future decision makers in taking special operations missions.

The factors involved in decision making by leaders as they assess risk and potential strategies can be addressed by Game Theory. The AHP is a very important tool in assessing and analyzing risk by ranking criteria and alternatives of decision making. Using case studies of special operations missions, such as OPLAN: Exodus, and applying the whole deductive method used in this research can help simplify the complexity of the case.

Additionally, the factors that resulted in the failure of the OPLAN: Exodus are presented using criteria, utilities, payoffs, and strategies that the players employed. As I have shown, these same factors corresponded to the events and decision making in the

actual case study. This study is based on a quantitative analysis of a singular event of decision making rather than the much more complicated continuity of events that unfold during the critical threshold on the battlefield. This quantitative study is merely a personal assessment based on information from open sources and personal expertise that can be applied for the purpose of this thesis. Every model and theory can make a quantifiable measurement of the causes of failure from different parts of the decisions made by the leaders in OPLAN: Exodus, but this research has tried to advance a combination of theory and analysis to extract more insight out of the existing literature and data that surrounds the controversial failure of the Mamasapano case.

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## **V. CONCLUSIONS AND RECOMMENDATIONS**

Educate the rest of the military—spread a recognition and understanding of what special operation units do, why you do it, and how important it is that you do it. Last, integrate your efforts into the full spectrum of our military capabilities.

—Admiral William J. Crowe, USN

The Philippine Senate reopened the case of OPLAN: Exodus on 25 January 2016 (Marcelo, 2016). Elizabeth Marcelo (2016) asserts that the public and the family members of the PNP-SAF are still waiting for justice and that the Senate of the Philippines seeks solutions to avoid another such incident in the future. However, political parties and certain public figures have exploited the senate's agenda during the reopening of the case. A marine general, Major General Alexander Balutan, AFP, who is a naval inspector in the Philippine navy, has presented his personal view through social media about the Mamasapano incident (Mangosing, 2016). The news media have cited his comment “that the incident is highly politicized and that the SAF should respect their comrades for their sacrifices and instead be aware of their sacred oath to protect their motherland with their life” (Mangosing, 2016). According to the news outlets have he added that the PNP-SAF, “should not be swayed by the pressure of politics and the media in making use of the situation” (Mangosing, 2016). There is still the gray area of the factors that contributed to the massacre of 44 PNP-SAF commandos and how this kind of event can be prevented in the future.

This study analyzed the case of OPLAN: Exodus in a systematic framework of knowledge. Ideally, the research questions should have been directed to the MILF, BIFF, and private armed groups for they are the proper parties who can better enlighten us on this matter. Definitely, the respondents can be held guilty of massacring the 44 PNP-SAF commandos. The Philippine Commission on Human Rights and other pertinent government agencies should have concentrated on filing the necessary criminal and civil cases and pursued military and police actions against the armed rebel groups.

However, it is critical and very applicable to analyze the organization of the PNP SAF and the strategic thinking of PNP-SAF leaders because such analysis provides a different toolset in thinking about the causes contributing to mission failure, especially in a complex situation like the OPLAN: Exodus. A combination of approaches was used in this study to examine the organizational behavior and structure, including the critical decision-making process of leaders. These approaches can identify the sources of failure in terms of the factors related to organization and leadership. The main point of the approach used is to answer the important question, “How can this be avoided in the future?” Both the qualitative and quantitative approaches failed to answer this question, but the deductive solution presented in this paper is a unique analysis and offers guidance in decision making especially for special operations missions.

Regardless of the limitations of this study, the process of analysis is not enough in and of itself. What is needed is further research on the organization and individual accounts of those involved in the operation. More quantitative analysis of leadership’s complex decision-making process using Game Theory can be tested on the Mamasapano incident. OPLAN: Exodus is an example of a very complicated special operations case, especially in the Philippines setting where SOF is still in the development phase. This methodological framework can be used in future analysis.

## **A. CONCLUSION**

- (1) What are the factors in the organization of Philippine National Police Special Action Forces (SAF) that led to the tragic result of the special operations mission: OPLAN: Exodus?

The failure of OPLAN: Exodus is the result of the organizational structure of the PNP-SAF and the coordinating mechanisms between the SAF and both the AFP and the CCCH, or the lack thereof. There is now workflow interdependence among these entities and therefore the need for communication. That necessitates stronger horizontal linkage mechanisms to facilitate communication across all the organization. The organizational structure of OPLAN: Exodus should have representatives from various organizations (AFP, PNP-SAF, and CCCH) to act as departments within the more broadly defined organization. Although the planning stage of OPLAN: Exodus fit the model of pooled

interdependence, this model changed as it moved through the phases of the operation, causing the tragic outcome of the special operations.

- (2) What are the criteria and principles of special operations that the leaders failed to consider in OPLAN: Exodus?

I used Game Theory to analyze the failure of leadership. By choosing two alternatives in decision making, which in the case of OPLAN: Exodus are characterized as “Coordination Failure,” leadership failed to acknowledge decision-making criteria or utilities. The assumptions made and the strategic game would have reached a different outcome. However, a decision is sound and timely when the leader chooses the payoffs according to what he thinks represents the best option. In the Mamasapano case, the set of criteria used in decision making by the leaders failed to address the contingency, which resulted in risk to the lives of the SAF commandos.

The factors identified by this research are based on another perspective of analysis. Mintzberg’s Theory of Organizational Structure can help leaders make critical decisions in the realm of bewildering uncertainty and complexity. To analyze the OPLAN: Exodus using new concepts of systems thinking, I applied organization design and analyzed its outcome. How does the organization operate, communicate, and perform its mission? I examined several issues through a thorough analysis. First, coordinating mechanisms and the work interdependence in the PNP-SAF were examined to determine which systems in the organization failed. There were multiple coordinating mechanisms (ToT, MCT, and Liaisons) that leadership in OPLAN: Exodus failed to consider. Second, Game Theory was used to analyze leadership decision making to find out which assumptions were utilized as criteria by the decision makers. Existing criteria for special operations missions could be used for quantitative analysis through different approaches. The MCDM and the AHP method can also possibly be used but need a better dataset to support the weight of the decision.

Finally, the combination of different approaches is a different method of case analysis especially for OPLAN: Exodus. The challenge of this study was to consider other experts’ background, knowledge, and judgment. The failure of OPLAN: Exodus



can be examined in many ways, but for this paper, organization theory and analytical narrative through MADM were used to examine the special operations mission at a different level.

## **B. RECOMMENDATIONS**

No matter how we looked at the case of OPLAN: Exodus, whether from the point of view of the organization or the decision maker, the mission failed to consider the organization as a whole working system, which is affected by its internal elements, units, environment, culture, and the decision makers. By applying organizational theory and the analytical narrative approach, I can now identify the lessons learned from the case study and recommend how we can avoid such a costly failure in the future.

### **1. Institutional Collaboration**

Organizational failure can be caused by many factors, but the most significant mistake identified in this study was the failure to emphasize collaboration between units. Interagency and multi-organization coordination are essential today, especially in uncertain environments like special operations missions. Usually, in situations similar to OPLAN: Exodus, the PNP-SAF and the AFP should be working together. The interagency council for counter-terrorism should have the main role for strategic decision making and implementation. Yet, this did not happen from the very start of OPLAN: Exodus. The chain of command was violated when the SAF decided to take action and oppose the president. An alternative way should have used coordinating mechanisms. As mentioned in previous chapters, there should have been an important coordinating mechanism between the SAF and both the AFP and the CCCH. This mechanism should have the role of the Anti-Terrorism Council of the Philippines.<sup>13</sup> This executive branch mechanism should be the top decision maker, which would prevent the culture and the

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<sup>13</sup> Anti-Terrorism Council – Program Management Center of the Philippines is headed by the Presidential Executive Secretary.

behavior of the PNP-SAF and its leadership from overruling the president's decisions and recommendations.

Considering the Anti-Terrorism Council as the coordinating mechanism can help various branches of the government to be represented and will promote the success of future missions. Even considering operation security, this is still the most feasible payoff for the risk outcome. Based on the PNP BOI recommendation, in several situations PNP-SAF were encouraged to have an interagency collaboration. The board suggests that "the findings also pushed for joint provisions to synchronize, reconcile, and institutionalize interoperability between the two agencies" (PNP BOI, 2015, p.91). Interagency planning, training, and operation have been the focus of the PNP's recommendation from the AFP perspective since immediately after the Mamasapano incident was investigated. It is imperative for special operations in the future to coordinate all efforts prior to execution.

## **2. Future Implications: Call for Inter-Agency SOF**

By accepting a critical mission such as OPLAN: Exodus, a special operations unit will be motivated. Unit members will train hard and pursue the success of the mission as presented by their leaders. In the words of Allison and Zelikov, "this situation sometimes becomes the critical behavior which changed their organizational culture and causes a group thinking attitude toward themselves which can be a positive, sometimes even dangerously effective instrument of rational choice". They assert that "this might have been influenced by controlling the purpose of the mission" of the SAF, including their plan to coordinate with the AFP (Allison & Zelikov, 1999). The organizational behavior has "a distinctive pattern of its own" similar to what the SAF and its leader followed during their mission (Allison & Zelikov, 1999, p. 157). This is also true in the case study of "Operation KINGPIN: the U.S. Army Raid on Son Tay on 21 November 1970". The case study implies that the leaders and men followed their strong culture of purpose for the mission without intelligence in their final execution.

When U.S. SOCOM was created on April 1987, it was to oversee and address the growing problems among special operations units from different branches of the U.S. Armed Forces. It was a part of the unified combatant command established by the U.S.

Defense Reform of 1986-Goldwater-Nichols Defense Reorganization Act (Locher, 2002). According to James Locher, it was also created because of failures to address different threats around the world, including the failed rescue attempt at the U.S. Embassy during the Iran hostage crisis of 1980, Operation: Eagle Claw (2002, pp. 31, 45, 218). This kind of change could be instructive to the GPH, especially to the AFP and the PNP.

General Stanley McChrystal, former commander of U.S. Joint Special Operation Command (JSOC), has emphasized the term of synergy. McChrystal contends in his book (2015) that the purpose of U.S. JSOC is to achieve a level of synergy among the interagency organization, like pooling all the capabilities for a certain mission and function of special operations (2015, p. 427). The idea is to push and stress the collaboration and coordination with all stakeholders involved in the mission of special operations. He established jointness from intelligence gathering, reconnaissance, and direct action. Missions overlap, as McChrystal emphasizes (Naylor, 2015). According to Sean Naylor (2015), McChrystal is positive on his vision of networked force for special operations missions (p. 428). He adds that “this was also mentioned on the warfare that the U.S. DOD will face in the future, in which the Department of Defense should work together with the different agencies and departments, including international organizations. Contemporary crises are complex” (2015, p. 449). Threats today need better interagency harmonization that would integrate all efforts of an organizational structure to perform positively in special operations missions.

The GPH has much to accomplish to achieve an interagency organization that will oversee and address the special operations of the AFP and PNP. There should be a holistic approach from the executive and legislative branches of the government to improve the Department of National Defense strategy and security policy. Coordination and unification of combatant forces like the special operations units from all the services and offices should be established into a joint special operations command that will reform and oversee the existing organizational structure into an effective interagency system. This interagency system will supplement the existing National Council for Counter Terrorism of the GPH.

The Philippines has not reformed its defense organization since its National Security Act of 1947, which was after World War II when independence was granted by the United States. Since then, the GPH has not revised its defense policy to be functional and viable for present security needs. The case of OPLAN: Exodus is one reason to study the National Security Act to address the problems that persist for the military and the National Police who everyday risk their lives to protect Filipino citizens. The real problems are not recognized in legislative and departmental structure.

I studied the organizational structure of SAF and found flaws in its culture and leadership. Even from the AFP, there have been no unified efforts to establish an organizational environment that could oversee the functions and capabilities to implement an interagency approach to critical special operations missions like the one in Mamasapano.

An interagency unified command for special operations is the solution to address the growing threats and the long war of insurgency. There should be a unified command similar to the U.S. SOCOM that will administer the critical capabilities and functions of all special operations units in the Philippines. These units would provide coherence and consolidated efforts, and they would be recognized as one force from different services. These services deliver unique professional skillsets for a multitude of missions and tasks, including special operations missions. The U.S. Joint Publication states that the “Special Operations have become an integral part of all the theater campaigns across the range of military operations around the world” (U.S. DOD Joint Publication 3-05, p. vii). The law makers of the GPH should be aware of special operations units, their mission, and their uniqueness compared to the conventional forces.

At the time of the writing of this paper, the investigation team of Mamasapano case has yet to identify the individuals responsible for the failure of OPLAN: Exodus. However, warrants have already been released for the arrest of BIFF, MILF, and the private armed groups (NBI-NPS SIT, 2015). They have been charged with murder and other criminal liabilities that the Department of Justice has established and presented at the Philippine Senate hearing. However, the strategic and bureaucratic side of a special operations organization like the SAF has never been tackled, nor have the implications of

these organizational factors on the future been considered, most especially on how a similar mission failure can be prevented.

### **3. Politics and the Special Operation Units**

Political implications always come hand-in-hand with special operations missions. They will always be an issue for a special unit like the PNP-SAF. The investigation of the Mamasapano case has attracted much attention, both positive and negative. It is said that a special unit like the SAF will always have an appeal to the public. Eliot Cohen states that “commando type units offer politicians in democracies both a tool of policy and a source of fantasy” (Cohen, 1978, p. 101). The controversy has led the PNP-SAF to be exploited; whether this is good or bad for a special operations unit will depend on the organization and its leader. Still, the stigma in their history as a special operations unit will serve as a benchmark either for them to improve or be questioned on their capability.

The positive effect of the Mamasapano case is that it has made the Filipino public aware of the existence of special operations and the risks these units take. Yet, publicizing an elite unit like the PNP-SAF does not seem to do any good. According to Cohen (1978), special operations in the military and the police should discourage as much as possible those who try to win a reputation for themselves or their units among the general public (p. 99). SAF may have gained supporters and sympathizers, but the enemy will also know them and their shortcomings very well.

The final point on the issue on politics concerns the attention SAF has been experiencing during the investigation of the Mamasapano case. SAF leaders would do well to restrain themselves around politicians and the media. Even other special operations units that have undergone similar investigations have considered the sensitivity of their men, equipment, and the mission. As has been said in other scholarly work, politicians can distort the efficiency of an elite unit by disclosing sensitive issues in order to gain appeal and become a favorite of both the public and elite units (Cohen, 1978, p. 100). The more controversial a special operations unit is, the more politicians and the media want to be involved with that unit.

### **C. AREAS FOR FURTHER RESEARCH**

The research I made needs some input from actual personnel or outside participants through the process of interview or by survey. Such input methods would allow reserachers to gather the weight of criteria needed by decision makers. Due to the limited time available and the extent of my graduate program, though, I approached the leadership decision analysis through Game Theory. Other strategic models for special operations are Lamb's criteria, the U.S. JCS JP 03-05, and the criteria of McRaven's Theory of Special Operations on Direct Action, which are suggested for future reference for analysis of OPLAN: Exodus.

I presented Game Theory through a partial-conflict game, which gives the decision maker his choice of strategy based on his desired payoff, while the utility of MADM through AHP can be applied by determining notional criteria desired by a researcher in the future. This approach can help probe the leadership factors that led to the leadership utilities used in decision making. These methods can be developed further for future interpretation and for determining options and criteria for special operations, especially in the case of OPLAN: Exodus.

Lastly, I emphasize the interservice and interagency approach for the future organization of Philippine Special Operations. Currently, there is an ongoing rivalry and parochial service approach in special operations in the Philippines. This problem is one of the most important areas for research that should be considered in developing the Philippines defense organization to avoid similar failures in the future.

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## **APPENDIX. NOTABLE PEOPLE**

### **(1) Executive**

Benigno Aquino – President of the Philippines. He was briefed by CPNP and DSAF

Philippine National Police

Alan Purisima – Chief, Philippines National Police (CPNP)

Gutulio Napenas – Director, Special Action Force (DSAF)

Supt. Michael Mangahis – Commanding Officer, 3rd Special Action Battalion (SAB)

Supt. Hendrix Mangaldan – Commanding Officer, 4th Special Action Battalion (SAB)

Supt. Raymund Train – Team Leader, 84th Special Action Company (SAC)

### **(2) Armed Forces of the Philippines**

Major General Edmundo Pangilinan – Commanding Officer, 6th Infantry Division

Colonel Gener Del Rosario – Commanding Officer, 1st Mechanized Infantry Brigade (MIB)

### **(3) Peace Process**

Manolito Orense – The Philippine government representative for the Ad hoc Joint Action Group (AHJAG).

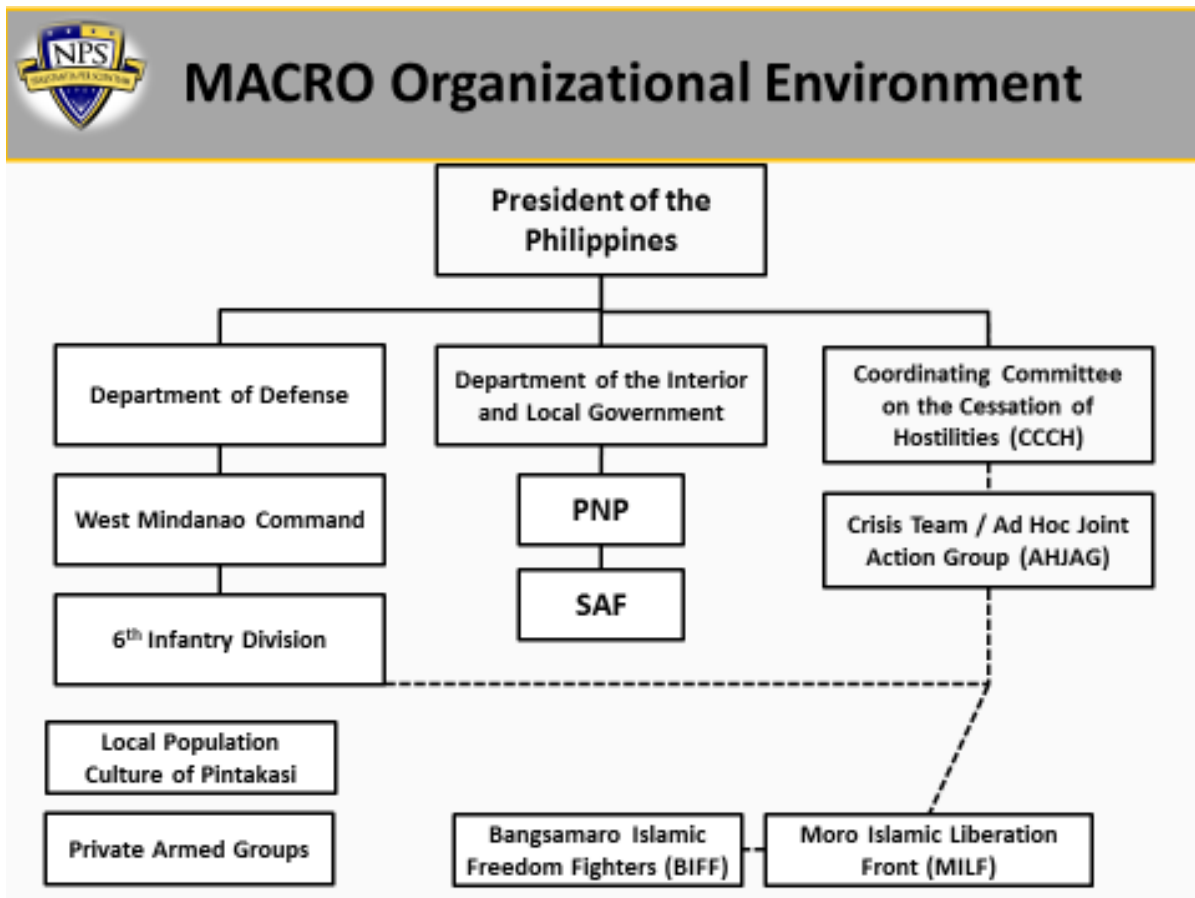
Abdul Dataya – The Moro Islamic Liberation Front representative for the AHJAG

Carlito Galvez – Philippine government Chair for the Coordinating Committee on the Cessation of Hostilities (CCCH).

Rasid Ladiasan – The MILF Chair for the CCCH.

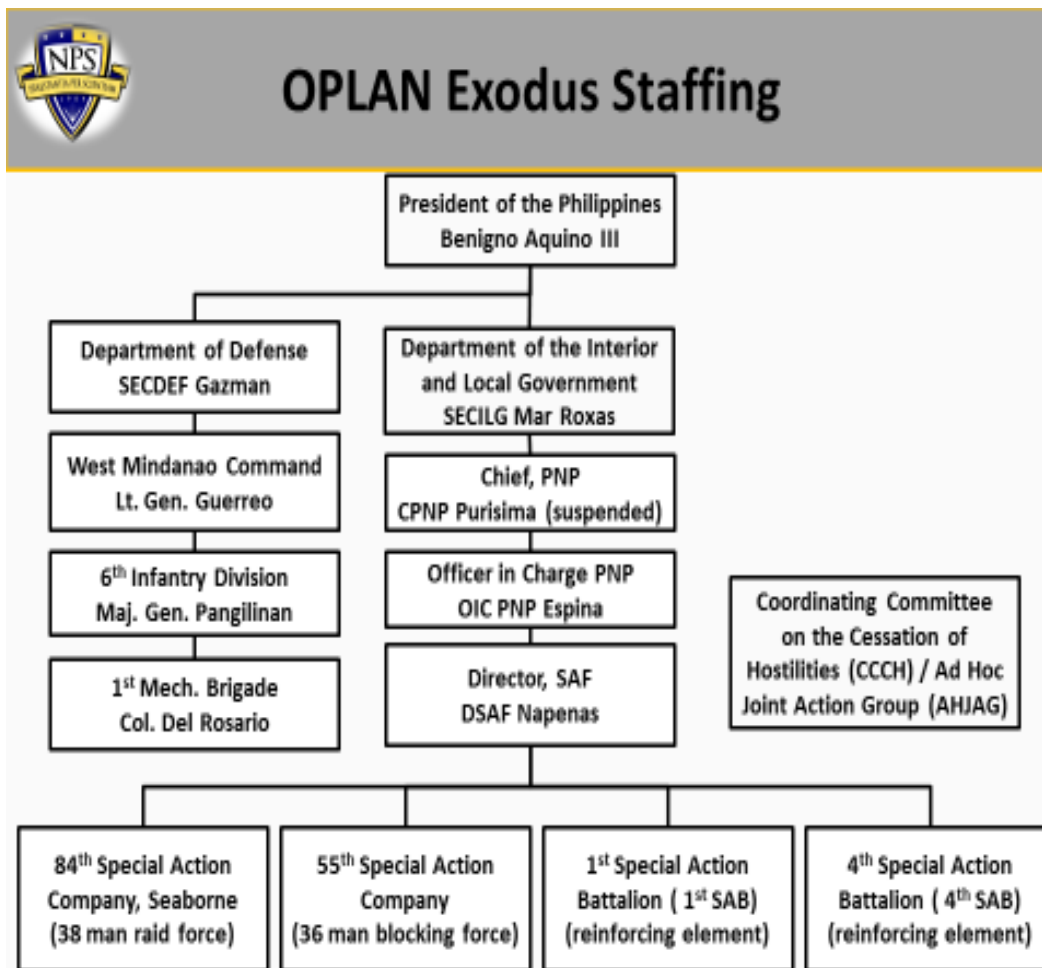


Figure 18. MACRO Organizational Environment



Sources: PNP BOI (2015), Philippine Senate (2015).

Figure 19. OPLAN: Exodus Staffing



Source: PNP BOI (2015).

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